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Historical, Contextual and Analytical Study of the
Quatre études de rythme and the Livre d'orgue*

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Olivier Messiaen: The Reluctant Avant-gardist

A Historical, Contextual and Analytical Study of the
Quatre études de rythme and the *Livre d'orgue*

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2014

ABSTRACT

Messiaen's highly influential *Quatre études de rythme* and *Livre d'orgue* are regarded as seminal works in the development of Total Serialism. Frequently labelled as 'experimental', the works appear to represent a radical shift in Messiaen's compositional aesthetics. Drawing on Messiaen's analyses in the *Traité de rythme*, this thesis assesses the *Quatre études* and *Livre d'orgue* as a response to the resurgence of interest in serialism that happened after World War II. The analyses discuss and assess Messiaen's new techniques but will also show that some of these have antecedents in practices developed by Messiaen earlier in the 1940s. Therefore, despite their apparent abstraction or asceticism, on one level the works can be seen as a logical development of Messiaen's compositional language. Because of the explosive impact of *Mode de valeurs et d'intensités*, it is important to place the *études* and *Livre d'orgue* in the context of the development of Occidental music in the twentieth century, and in the context of Messiaen's quintessential style as it was by the mid 1940s. The first half of the thesis, therefore, discusses issues surrounding the development of musical language and style in the twentieth century, Messiaen's quintessential language, the renaissance of the Second Viennese School, and the pressures exerted by the emerging new generation of composers. These are all integral to understanding the composition of Messiaen's experimental works, and an awareness of the people and events that shaped Messiaen's life during this period also sheds light on 'why' Messiaen composed the *études* and *Livre d'orgue*. In order to determine what did or did not influence Messiaen, the thesis draws on theories of influence developed in art and literature, before highlighting experiences (positive and negative) that were influential in shaping the future direction of Messiaen's musical language and, by implication, the future of twentieth-century music.

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NOTES TO THE TEXT

All translations, unless otherwise indicated, are by the author. In order to limit the length of footnotes, references to Messiaen's seven-volume *Traité de rythme, de couleur, et d'ornithologie* will be abridged after its first citation, as in the following example: *Traité*, III, p. 100. (It is not necessary to include Messiaen's name). References to the frequently cited co-authored book on Messiaen by Peter Hill and Nigel Simeone will take the form, Hill and Simeone, p. 100 (after the first citation).

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CHAPTER ONE

À la recherche de la *Lingua Franca*

It can hardly be doubted that the objective *existence* of the *Mode de valeurs et d'intensités* [...] coincided, for the young musicians of the time, with its *importance*: an importance far more concerned with—and this was also the view of its composer—the consequences of the step taken than with the intrinsic value of the piece itself.¹

1.1 Introduction

Célestin Deliège sees Messiaen as ‘the pivotal’ figure of the late 1940s, in particular because of his innovative approach to working with all the parameters of music together, rather than separately.² The seminal or most influential work was Messiaen’s *Mode de valeurs et d’intensités*, one of the *Quatre études de rythme*, written in 1949. This work thrust Messiaen to the forefront of the avant-garde, something that did not sit well with him. When the thesis examines the genesis and creation of *Mode de valeurs*, it will be seen that Messiaen was a somewhat reluctant participant in the exercise. Several other innovative works would follow (the *Messe de la Pentecôte* and the *Livre d’orgue*) and, despite further developing techniques that had appeared in *Mode de valeurs*, Messiaen also revitalises (or recasts) techniques solidified earlier in the 1940s. In other words, Messiaen (as an avant-gardist) does not totally negate his past, and in these works there is a paradoxical sense of the music simultaneously looking forwards and backwards. This concept is integral to understanding the evolution of Messiaen’s compositional language: do the works of 1949 to 1952 represent a radical departure from Messiaen’s quintessential style or can they be seen (even in a small way) as a logical evolution of his language? The answer lies in a compromise between these two hypotheses: there is a dramatic aesthetic development in Messiaen’s musical language after 1949 that looks to the future; these developments, though, would not have been possible without the techniques Messiaen had fermented earlier in the decade.

¹ Célestin Deliège, ‘A Period of Confrontation: The Post-Webern Years’, in *Contemporary Music: Theoretical and Philosophical Perspectives*, ed. by Irène Deliège and Max Paddison (Ashgate: UK, 2010), pp. 143–71 (p. 148). A revised and expanded English edition of *Musique contemporaine: perspectives théoriques et philosophiques* (Spirmont: Pierre Mardaga éditeur, 2001).

² Deliège, p. 148.

Mode de valeurs exists, according to Deliège, because of an ‘historical situation.’³ Events in the 1930s and 1940s played a crucial role in shaping the future direction of music, and Messiaen was one of the key figures at the centre of this. The fact that both Boulez and Stockhausen saw in *Mode de valeurs* the possibility of extending the serial techniques developed by Webern,⁴ confirms how important and influential Messiaen was during these crucial years. This ‘historical situation’ will be assessed in the next two sections of this chapter. Webern’s usurping of Schoenberg will be teased out as this thesis progresses.

One of Messiaen’s reservations about serial music was its pre-occupation with pitch so, by the late 1940s, he aspired to give equal priority to all music’s elements. Paradoxically, rather than giving the impression of working with everything together, all the parameters had to be initially separated or catalogued. One of the consequences of extracting the constituent parts meant that pitch (class) replaced ‘melody’ and durations replaced ‘rhythm’; harmony (any resulting ‘chord’) and counterpoint (any resulting independent moving lines) was now simply the abstract coincidental interaction of these constituent parts. And, although expression in music does not solely rely on dynamic or articulation markings, these too can be extrapolated and added to the canvas of abstract pitches and durations. If we understand the evolution of music as a series of small progressive steps, some of which cling nervously to what has come before, then this development must surely be the most radical: its total negation of the past sets it apart from other momentous events, such as the dissolution of tonality or the development of serialism. It is not as if melody and rhythm, stalwarts for hundreds of years, are totally redefined; rather, these concepts are no longer etymologically sound.

Messiaen’s views on serialism are discussed in Section 4.5. In advance of this, it is important to establish how this term (and its derivatives) will be used in this thesis. Although the term ‘serial’ can refer to a broader set of organisational procedures (for example, duration and dynamics) and that such procedures can be applied to series of more or less than twelve notes, in this thesis the term refers to the ‘traditional’ twelve-tone techniques created by Schoenberg and subsequently developed by Berg and Webern. In Paul Griffiths’s article on

³ Ibid., p. 149.

⁴ Ibid.

‘Serialism’ in *Oxford Music Online*, he notes that ‘12-note serialism’ is ‘sometimes referred to as “dodecaphony”, a term which is ambiguous in that it can [also] refer to non-serial tonal music.’⁵ In order to reduce instances of ambiguity, I will refrain from using ‘dodecaphony’ unless it appears in direct quotations: a case in point is Messiaen’s inconsistent use of the term in his analysis of the *Livre d’orgue* (see Chapter 8). Therefore, through the course of this thesis, a clear distinction will be made between twelve-tone writing based on traditional serial techniques (i.e. using a row and its derivatives created through transposition, inversion and retrogradation) and alternative techniques to composing with all twelve tones.

This total ‘rebirth’ or reincarnation of music came at a time when the world was forced to look at itself after the horrors of World War II. A new world order was needed to ensure nothing like this could ever happen again. Likewise, the emerging generation of new composers strove for something new, and this generation looked to the most unlikely of sources for stimulation: Olivier Messiaen. These young composers (who at this time were still coming to terms with traditional serialism) saw in Messiaen’s *Mode de valeurs* a prototype for a new method of composition. But, given that *Mode de Valeurs* did not become known until 1951, it could be argued that this seminal piece by Messiaen merely crystallised concepts that were already coming to the fore. The piece resonated with young composers because, surreptitiously, Webern’s music was being seen as more progressive than Schoenberg’s. In retrospect, it would be Webern rather than Schoenberg (or Berg) who would prove the most influential of the Second Viennese School in the late 1940s and early 1950s. This was due, in no small part, to Webern’s attempts at integrating multiple parameters in his music. Later, this thesis will highlight Webern’s Op.27 Piano Variations from 1936 (in particular, the second movement) as a possible precursor to *Mode de valeurs*.⁶

⁵ Paul Griffiths, ‘Serialism’, in *Grove Music Online/Oxford Music Online*. (Oxford University Press), <http://0-www.oxfordmusiconline.com.ditlib.dit.ie/subscriber/article/grove/music/25459> [Accessed 20 August 2014]. In the *Encyclopaedia of 20th-Century Music* Griffiths also notes that ‘Distinctions between “dodecaphony”, “serialism” and “12-note composition” are, moreover, impossible to sustain and so the last [12-note composition] has been preferred here as being of clearer meaning and widest currency. But it cannot be applied to works in which the set consists of other than 12 notes.’ See Griffiths, *Encyclopaedia of 20th-Century Music* (London: Thames & Hudson, 1986), p. 163.

⁶ See Section 4.5.

Other works by Webern, such as his Op.21 Symphony, saw the composer apply fixed timbres/colours to notes and sound complexes. Pascal Decroupet, commenting on the exposition of this symphony, suggests that ‘fixed registration enables a virtuosic polyphonic treatment (double canon in contrary motion), and generates homogeneity in a centrifugal sound universe.’⁷ Another composer, whose interest in timbre was to prove influential, was the French-born composer Edgar Varèse. Varèse moved to the United States during World War I, but returned to Paris for several years in the early 1930s; as a result, he had an influential foot on both sides of the Atlantic. Boulez, in examining works by Webern and Varèse, saw that timbre was no longer merely an adjunct: ‘orchestration no longer has a decorative function, but is itself part of the structure [...]’⁸ Inherent in Boulez’s comment is that all parameters are equal and should be worked on together. This is exactly what Messiaen did in *Mode de valeurs* and in the works that followed over the course of the next two to three years. This ‘liberation’ of timbre could not have happened without a similar thing happening to rhythm earlier in the twentieth century. David Drew described rhythm in Classical and Romantic music as ‘an adjunct to harmony and melody’. He goes on to say that Stravinsky’s ‘Augurs of Spring’ from *Le Sacre du Printemps* marks the climax of the ‘gradual disassociation of rhythm from the other musical elements.’⁹

1.2 Overview of Thesis

From the above Introduction, it is clear that the post-1945 generation of composers were searching for a technique or an approach that would provide a new way forward for musical composition; it was not going to be acceptable or desirable to simply resurrect and regenerate the past. This quest for a *lingua franca* is discussed in the next section of the thesis (Section 1.3) and is followed (in Section 1.4) by an assessment of political and cultural events that provided the catalyst for this urgent reappraisal of modern music. Reference will be made later to the *Zero Hour*, the idea that a line is drawn under all that has happened

⁷ Pascal Decroupet, ‘Varèse, Serialism and the Acoustic Metaphor’, in *Contemporary Music*, ed. by Deliège and Paddison, pp. 117–31 (pp. 117–18).

⁸ Decroupet, p. 121, citing Boulez, *Relevés d’apprenti*, p. 228.

⁹ David Drew, ‘Messiaen: A Provisional Study’, *The Score*, 10 (1954), 33–39 (p. 46). I would argue that the ‘Sacrificial Dance’ was more radical and influential.

and people start again from scratch. There was an urgency after World War II to find a new way forward for society and this need also permeated the musical world. The crux of the matter for young composers was the issue of language. One thing for certain was that neoclassicism would not be the way forward, but neither would Messiaen's highly personal mode of expression. This chapter will conclude (Section 1.5) with a short assessment of Messiaen and 'Modernism' in works that (once again) look forwards and backwards. In the context of the musical climate of the 1940s (which, in part was dominated by neoclassicism), Messiaen's idiosyncratic language made him appear neither progressive nor conservative, which gives the impression that Messiaen was 'stuck'. Ironically, a feature of Messiaen's music is such 'stasis', which in its own way is modernist as it marks a departure from the teleology associated with much Western music.

That Messiaen played such an important role in recasting the very fabric of musical language is just as astonishing as the radical change itself. It poses the question, 'why Messiaen'? Chapter 2 addresses this by highlighting important milestones in Messiaen's life in the 1940s. It will show that the decade is a story of two halves: in the first five years Messiaen solidified his compositional practices with the publication of *Technique de mon langage musical* and enjoyed an increasingly prominent and respected position as a teacher and composer. The second half of the decade is marked by a debacle in the press (which became known as 'Le cas Messiaen') in which Messiaen endured not just criticisms of his music, but criticisms that seemed to go to the very core of who he was.¹⁰ It is possible to document how Messiaen was an influential figure for young composers in the late 1940s (some of this will be discussed later in this chapter); much has also been written about what influences shaped Messiaen as a composer, including a recent publication by Christopher Dingle and Robert Fallon.¹¹ In any assessment of influence, it is important to be aware of the many external non-musical forces at work, and any discussion of influence should find ways of addressing the questions of 'how' and 'why' a composer was influenced. Therefore, before discussing the important milestones in Messiaen's life in the

¹⁰ 'Le cas Messiaen' is discussed in detail in Section 2.3.2.

¹¹ Christopher Dingle and Robert Fallon, *Messiaen Perspectives 1: Sources and Influences* (Farnham: Ashgate, 2013). Part of the focus in Part II of the book is to consider specific musical influences on some of Messiaen's compositions. I will refer to some of these later but, as the book has just been published, it has not been possible to assimilate all its findings at this stage.

1940s Chapter 2 will begin by providing a theoretical framework to assess the validity of influence statements. That Messiaen had an idiosyncratic language prior to *Mode de valeurs* shows that there was some shift in Messiaen's aesthetics in the late 1940s: how else would he have come up with the idea for *Mode de valeurs*, the piece that the next generation would hold up as the inspiration for Total Serialism. The discussion on influence also assesses how composers deal with the past, under the sub-heading 'The Anxiety of Influence' (a title taken from Harold Bloom's book of the same name).

Chapter 3 applies the theories of influence outlined in Chapter 2 to several people who were pivotal in shaping Messiaen's journey to the composition of *Mode de valeurs*. We already know from *Technique de mon langage musical* and numerous interviews (Samuel, Goléa) about the influence of Stravinsky, Wagner and Debussy (to name but a few) on Messiaen. Messiaen also acknowledges that his piano music of the 1940s is heavily indebted to the prodigious talents of one of his students: Yvonne Loriod. But, this thesis is not about the influences that shaped Messiaen's musical language in the 1930s and the early 1940s; its focus is on events and people in the mid- to late-1940s that contributed to or influenced the composition of the so-called 'experimental' works. Chapter 3, therefore, focuses on the influence of Pierre Boulez, René Leibowitz and John Cage. The rationale for concentrating on these three people is explored below.

The chapter begins by assessing the somewhat turbulent relationship between Boulez and Messiaen. It will show that reciprocal influences are at work. For example: Boulez, as a pupil of Messiaen, is initially influenced by his teacher; Boulez then changes allegiance to René Leibowitz to learn about serialism and becomes critical of his former teacher; Messiaen, in turn, then acknowledges the change in direction of Boulez's music (seen, for example in the second piano sonata) and is drawn into the resurgence in interest in serial music. The apparent rift between Boulez and Messiaen ends with Boulez using the first division of Messiaen's *Mode de valeurs* as the prime row in his piece for two pianos, *Structures Ia*, and both men premiering the work. Despite this topsy-turvy relationship, I would describe the influence of Messiaen on Boulez and then Boulez on Messiaen as a positive, affirming, experience.

René Leibowitz was an important figure in Paris in the mid 1940s. He did much to promote the serial works of Schoenberg, Berg and Webern and, as

hinted at above, he proved to be something of a rival to Messiaen as he offered instruction in serial composition. His influence on Messiaen is less direct than that of Boulez. Of interest to this thesis is Leibowitz's damning critique of Messiaen's language in an article published in 1945. In the midst of 'Le cas Messiaen' in the press, here was a scholarly article that challenged the very foundations of Messiaen's musical language. It is not clear if Messiaen was aware of the article at the time but there are some indications that at some point he must have known about it. The evidence for this is seen in Messiaen's *Traité de rythme, de couleur et d'ornithologie*. Leibowitz is mentioned on a few occasions and, somewhat uncharacteristic of Messiaen, the tone is at times sarcastic. These comments will be seen later in the thesis in the analytical chapters.

Chapter 3 concludes with an account of John Cage's visit to Paris in 1948 in which he performed his *Sonatas and Interludes* for Prepared Piano. Perhaps even more important than the actual performance, was Boulez's introduction to the work in the presence of Messiaen. Specifically, Boulez highlighted that Cage gave to each note a specific timbre that was fixed for the remainder of the work; this is analogous to what Messiaen would do in *Mode de valeurs*, but without resorting to modifying the piano. Before Messiaen completed *Mode de valeurs* in 1949, he experimented with the technique that would form the basis for this *étude* in a short section of *Cantéyodjayâ*, also for piano.

In order to appreciate the musical language of the *Quatre études de rythme* that would prove influential to the next generation, it is important to take stock of what constituted Messiaen's language in the period leading up to 1949. This is dealt with in Chapter 4. It is important to stress that the purpose of the thesis is not to give an exhaustive account of every aspect of Messiaen's technique in the 1930s and 1940s. To that end I have confined myself to highlighting characteristics that will appear recast in the works from 1949 to 1952. This is not to suggest that these pieces are any the less radical than is generally accepted; rather, the purpose is to show that the works contain a mix of the old and the new and demonstrate some logical developments in Messiaen's musical language. The chapter will focus on (i) Automatism, (ii) the Modes of Limited Transposition and their connection to the formation of serial rows, (iii) chromatic rhythm, and (iv) Messiaen's views on serialism.

Chapter 5 provides background information on the composition of *Mode de valeurs* and goes on to discuss the piece's reception after a recording was played in Darmstadt. The reaction and testimonies recounted show just how important this short piece of music would turn out to be. But, before going on to analyse the piece in detail in Chapter 6, it is important to analyse its precursor: in particular, the 'Modéré' section of *Cantélyodjayâ*. There is still some debate today as to which work was written first; for many years this was not helped by the year of composition of *Cantélyodjayâ* being erroneously recorded as 1948. Even with this corrected to 1949, the exact chronology of events needs to be teased out. This will be dealt with towards the end of Chapter 5. The analysis of *Cantélyodjayâ* will reveal some intriguing results, including a mistake by Messiaen, and a possible connection to some of the Modes of Limited Transposition.

The second half of the thesis (chapters 6 to 9) consists of detailed analyses of the pieces that make up the *Quatre études de rythme* and the *Livre d'orgue*. In all my analyses I bring in and assess Messiaen's interpretations of the works in the *Traité*. The purpose of the analyses is to assess the music in the context of Messiaen's own compositional language in the 1940s, and to highlight innovations that offer new approaches to working with all the parameters of music as an alternative to traditional serialism. These pieces were composed during the period 1949 to 1952 but they are not the only works of this period. Other works of an experimental nature include the *Messe de la Pentecôte* (for organ) and *Timbres-durées*, Messiaen's one and only foray into *musique concrète*. Given the scale of the analytical chapters, most of Messiaen's innovations are sufficiently covered in the *Quatre études* and the *Livre d'orgue*; therefore, and due to the constraints of the thesis, I will not be discussing the *Messe*. In addition, as *Timbres-durées* is for a different medium (tape), this work will not be discussed.

Chapter 6 is devoted entirely to *Mode de valeurs*, as this is regarded as the most influential of the *Quatre études*. There is a strong emphasis in the analysis on trying to account for as much of the material as possible. Indeed, the analysis reveals that a substantial proportion of the piece is highly organised through the use of new arrangements of twelve-tone rows. This marks Messiaen's first venture into providing an alternative way of organising twelve tones. He

describes the technique as ‘interversions’, a technique that will dominate *Île de feu 2* and virtually every movement of the *Livre d’orgue*. Although there is a direct co-relation between pitch and duration, Messiaen’s analysis is more focused on rhythm. The pitch content of music has not received a huge amount of analytical examination and I address this, both from a twelve-tone and motivic viewpoint.

Chapter 7 discusses the remaining three *études*: *Île de feu 1*, *Île de feu 2*, and *Neumes rythmiques*. The most substantial part of the chapter is devoted to the interversion techniques in *Île de feu 2*; this provides an opportunity to examine the technique of permutation in an abstract context and to build on Messiaen’s writings in the *Traité*. The analysis will show that not all the twelve-tone material in *Île de feu 2* is generated by permutations; one of the most interesting sections is a palindromic toccata, the analysis of which reveals interesting results that show both the forward-looking nature of the work and a return to Messiaen’s fascination with prime numbers. The analysis of *Neumes rythmiques* likewise reveals a mixture of the new and the old: the use of fixed timbre (new) and the deployment of non-retrogradable rhythms and prime numbers (old).

Chapter 8 is the first of two chapters devoted to the *Livre d’orgue* and analyses ‘Reprises par Interversion’, ‘Les Yeux dans les Roues’ and the two ‘Pièce en Trio’ movements. It shows Messiaen developing further his interversion techniques in ‘Reprises’ and ‘Les Yeux’, while the two Trios are perhaps unique in Messiaen’s output in their deployment of traditional serial rows (using inversion, transposition and their retrogrades). Even drawing on Messiaen’s analysis in the *Traité* (which in terms of understanding the pitch content is very disappointing), and those of other authors who describe the pieces as serial, the analyses are far from straightforward and can end up being a little contrived; in other words, one is almost forced into finding the twelve-tone rows having been told that they are there. These pieces and some of the others in the *Livre d’orgue* also see Messiaen rekindle his interest in the *deçî-tâlas* but treated to radical alterations through augmentation, diminution and irrational values. The first two treatments have been seen in earlier works but perhaps not to the same extremes; the use of irrational values is new and was developed at length in the *Messe*.

Chapter 9 deals with the remaining three pieces of the *Livre d'orgue*: 'Les Mains de l'Abîme', 'Chants d'Oiseaux' and 'Soixante-Quatre Durées'. 'Chants d'Oiseaux' is notable for propelling Messiaen into a decade of birdsong works; 'Les Mains de l'Abîme' is the second piece in the *Livre d'orgue* with some religious symbolism ('Les Yeux' is the other) and, like 'Reprises', is notable for its austere registration. Technically, the piece consists of a mixture of techniques: old chord structures from earlier in the decade, some twelve-tone writing, distortion of *deçî-tâlas*, and irrational values. The final piece, 'Soixante-Quatre Durées', is Messiaen's most ambitious use of chromatic rhythm, as can be gleaned from the title. The durations are also treated to interventions, and the pitch material consists of traditional serial twelve-tone rows. It seems appropriate that the *Livre d'orgue* concludes with a piece that on one level seems totally 'automatic' (in the deployment of the durations through intervention), and on another level seems improvised despite the middle voice being based on traditional serial rows.

The analysis of the *Livre d'orgue* will reveal that this work is a summation of all of Messiaen's musical techniques to date and, far from representing the end of his 'experimental' period, the work seems like a technical repository that Messiaen would draw on in later works. By the end of these analytical chapters the reader will have a strong sense of Messiaen, the avant-gardist, but also an understanding of his reluctance to totally negate his past. All these points will be drawn together in Chapter 10, the Conclusion.

1.3 À la recherche de la 'Lingua Franca'

Pivotal moments in the evolution of the arts frequently coincide with important political, societal and scientific events, and may also be inextricably linked to developments in philosophy. The twentieth century, in particular, saw the metaphorical contraction of the world and the astronomical expansion of its population. It was not until circa 1804 that the world's population reached one billion; and it would take another 123 years for it to reach two billion (in 1927). The population doubled to four billion twenty-seven years later in 1974.¹² The population hit the seven billion mark in October 2011, which perhaps indicates

¹² <http://www.learner.org/courses/envsci/unit/text.php?unit=5&secNum=4> [accessed 27 October 2013].

that the exponential growth may be subsiding a little. What this data demonstrates is that the twentieth century was ripe for progressing all aspects of life, including the arts. One of the consequences of this is that the rate at which things change dramatically increases. Stuckenschmidt notes that the ‘intervals between the alternating milestones are irregular. But with all their irregularity they occur more and more frequently [...] [which] is caused by the awakening and growing individualism of artistic creation’.¹³ With decisive or pivotal events happening with greater frequency, our perception of time changes; this perceived acceleration of time affects all aspects of life, and the arts are no exception. The weight of history, and the pressure to be original is nowhere more keenly felt than in the twentieth century, particularly in its first six decades (this is one of the fundamental issues that gives rise to the discussion of influence, and will be assessed in Chapter 2). With hindsight it is possible to make sense and see coherence in the development of the arts but, in order to gain a true insight, we must place ourselves in the ‘moment’ and see things from the artists’ perspective.

Two of the greatest seismic events in the evolution of music were the development of polyphony and the dissolution of tonality. After the former, changes in style/language were subtle, measured and almost universal; after the latter, changes were brazen, uncompromising, and individualistic. Take, for example, traditional serialism; a close examination of the approaches of its three pioneers (Schoenberg, Berg and Webern) reveals highly idiosyncratic practices, none of which provided the twentieth century with one of its *lingua franca*. To some extent, all three composers ‘clung’ on to traditional forms and, in this respect, it may be that the project was doomed before it even started. Yes, there were problems with appalling censorship during the 1930s and 40s but this music was given a second chance in the latter part of the 1940s and did form the basis for a derivative movement: integral, or total, serialism. But again here, there was to be no unified approach, and all the music seemed to do was to drive an even greater wedge between the public and the cognoscenti. Composers, fuelled by this quest for further abstraction, and the tireless pursuit of negating all that had come before (‘the anxiety of influence’, to be discussed in Chapter 2), have provided a body of music whose aesthetic value seems to be determined by its

¹³ H. H. Stuckenschmidt, ‘Contemporary Techniques in Music’, *The Musical Quarterly*, 49, no. 1 (1963), 1–16 (p. 16).

susceptibility to complex analytical techniques. But, once a piece yields its secret (and sometimes the composer initiates this), it is time to move on for, to paraphrase Kierkegaard ‘there is nothing more to gain, but everything to lose’.¹⁴

A piece such as Boulez’s *Structures Ia* for two pianos will illustrate the point. In one of the first attempts at integral serialism, Boulez does as much as possible to remove himself from the creative act of composing. As a starting point, he chooses the first twelve-tone division from Messiaen’s *Mode de valeurs* as his source material: so, even the raw ingredients are not his. And, in a twisted homage to the Second Viennese School, all possible forty-eight versions of this row are stated, with their order determined by sets of twelve by twelve matrices.¹⁵ This was never the intention of the original serialists; for example, that most ‘minimalist’ of composers, Webern, rarely used more than three or four rows (and their inversions/retrogrades) in a movement. Boulez had originally intended to entitle the work ‘At the limit of the fertile land,’ seeming to imply that there was nowhere left to go.

Larry Todd suggests that the sketches for Webern’s final work reveal that he too had ‘approached a limit of serial composition’. Fixed registration or timbre was not new in Webern but in this work there is a strong focus on the non-pitch elements in the pre-composition phase: Webern explores ‘symmetrical patterns of registration which are then re-employed in different combinations. It is as if the registration and the contour design of the series are emancipated only

¹⁴ ‘When two people fall in love and suspect they are made for each other, the thing is to have the courage to break it off, for by continuing they only have everything to lose and nothing to gain. It seems a paradox and is so, for feeling, not for understanding’. Søren Kierkegaard, *Either/Or (Enten – Eller)* (1884), trans. by Alastair Hannay (Penguin Books, 1992), p. 238.

¹⁵ Ligeti did a detailed analysis of the work, which was published in ‘Pierre Boulez (Decision and Automatism in *Structure Ia*)’, *Die Reihe*, 4 (1960), 36–62. Speaking about Ligeti’s analysis, Morag Grant says that he ‘made some strong aesthetic points which, a brief reception history shows, have often been disregarded in favour of his observation that the methodology of the piece is sometimes in contradiction to its aural reality. This problem is fundamental to many analytical theories of atonal and new music [...] There is, quite simply, an obsession with finding structural unity from the smallest to the largest sections of musical structure, oftentimes purporting to re-create the composer’s “intention”’. M. J. Grant, *Serial Music, Serial Aesthetics: Compositional Theory in Post-war Europe* (Cambridge: Cambridge University Press, 2001), p. 156. See also Lynden DeYoung, ‘Pitch Order and Duration Order in Boulez’s *Structure Ia*’, *Perspectives of New Music*, 16 no. 2 (1978), 27–34. DeYoung notes that Ligeti could not find a relationship between the each pitch set and its note values. ‘Ligeti looked toward Messiaen for a clue to relationships between pitch sets and duration sets in *Structure Ia*, and found none’. The answer, according to DeYoung, is to be found in Webern’s Piano Variations. (see p. 28).

to be brought under strict, serial-like control.’¹⁶ The mechanical rigidity of *Structures Ia* has some precedent in Messiaen’s music (this will be discussed later), but Webern’s attention to ‘organisation’ must be acknowledged as an important precursor to, and therefore an influence on, total serialism. Erwin Stein’s tribute to Webern in *The Musical Times* opens with the line: ‘The death of Anton Webern has deprived the musical world of a rare personality’.¹⁷ Very astutely for the time (given that Webern’s music was banned under the Nazis), Stein makes a telling comment about Webern’s approach to twelve-tone writing: he notes that ‘Webern remains the lyricist. His phrases are fitted together like coloured patterns into a mosaic.’ Stein recognised that Webern was not merely composing out a twelve-tone series and that the series was not used ‘to build hard-and-fast structures’.¹⁸ This is indeed true. The structure and form of Webern’s music in itself offers very little that is new. As mentioned earlier, all composers of the Second Viennese School had at least one foot embedded in the past; in Webern’s case it was a fascination with counterpoint.

Visually and upon hearing, Boulez’s *Structures Ia* seems utterly chaotic: another stream-of-consciousness, if you will. But, upon tedious and detailed inspection, the piece offers its secrets in the visual domain. Once cracked, the edifice seems much less imposing and the piece becomes more of a ‘paint by numbers’ than a Picasso. The inevitable ‘working out’ of the process creates a cul-de-sac, of which there would be many in the middle of the twentieth century. To continue the road metaphor, and whether he liked it or not, some of Messiaen’s approaches to generating musical material saw him stuck on the metaphorical roundabout, with all exits marked ‘entrée interdite’.

In conversation with David Walters, Boulez describes the first piece of *Structures I* as ‘automatic [...] a kind of computer experience sense’.¹⁹ Boulez goes on to suggest that the subsequent two pieces *Structures Ib* and *Ic* see the composer conquer the material:

¹⁶ R. Larry Todd, ‘The Genesis of Webern’s Opus 32’, *The Musical Quarterly*, 66 no. 4 (1980), 581–91 (p. 591).

¹⁷ Erwin Stein, ‘Anton Webern’, *The Musical Times*, 187 no. 1235 (1946), 14–15, (p. 14).

¹⁸ *Ibid.*

¹⁹ David Walters, ‘Artistic Orientations, Aesthetic Concepts, and the Limits of Explanation: An interview with Pierre Boulez’, in *Contemporary Music*, ed. by Deliège and Paddison, pp. 305–17 (p. 315).

[...] in the first piece, let's say, the material is stronger than the composer, then secondly that the material is in equality with the composer, and third that the composer is stronger than the material.²⁰

There is an interesting link here with Liszt's three versions of his twelve piano *études*: the second set (*Douze Grandes Études* (1837)) saw a marked increase in the technical requirements from the original *Étude en douze exercices* from 1826; the final set, (*Études d'exécution transcendante* (1852)) saw some simplifications from the previous set. Again, the issue here is whether the material controls the composer or vice versa.

The intention here is not to belittle Boulez's *Structures Ia* but to see it for what it really is: a technical exercise in automatism. The fruit of Boulez's endeavours is seen in his seminal *Le Marteau sans maître*, but even this seems to mark the journey's end, rather than its beginning. Stockhausen, likewise, had some success in creating accomplished pieces of music using total serialism, albeit in a different approach to that taken by Boulez.

The counterpart to 'total organisation' was not 'total disorganisation', but chance. At around the same time as Boulez and Stockhausen made their first forays into total serialism in Europe, John Cage was experimenting with chance operations in the United States. American music had already endured several phases of experimentation by the 1940s (for example, in the works of Cowell and Varèse) and did not quite have the same weight of European music history on its young shoulders. In contrast to *Structures Ia*, Cage's chance music scores yield very little to the analyst but, from an aural perspective, the listener's experience of such 'unorganised'²¹ music may not differ that much from his/her experience of completely 'organised' music. As will be seen in Chapter 3, Boulez and Cage developed a strong bond after the latter visited Paris in the late 1940s. Their letters, gathered in *The Boulez-Cage Correspondence*,²² provide a fascinating insight into how these two giants of the twentieth century fed off each other but ultimately moved along diverging paths.

Virtually all music written before the dissolution of tonality can be rationalised theoretically for the average listener without having to engage in

²⁰ Walters, p. 316.

²¹ It is important to clarify that such music is not 'disorganised' as such, as there was no original order to be disrupted.

²² *The Boulez-Cage Correspondence*, ed. by Jean-Jacques Nattiez, trans. by Robert Samuels (Cambridge: Cambridge University Press, 1993).

complex analytical theories. At its most fundamental level, such music is governed by the naturally occurring harmonic series; the major and minor chords of tonal music are ‘pleasing’ to the ear. Even very rich and highly chromatic nineteenth-century music (for example Wagner’s *Tristan und Isolde*) still adheres to the basic principles of tonality, albeit in a heightened state. The main difference between such music and an early classical piece is that in the former, the eventual resolution of any departures from the tonic may take place via further disruptions. The psychological release when the music does resolve is therefore much more intense. Adorno, in *The Philosophy of New Music*, objected to attaching too much weight to this ‘natural’ interpretation on the functioning of tonal music and, quoting Hegel, suggests that the audience (consumer) is more interested in how the music makes them feel rather than the feeling that the work of art stands for.²³ Adorno does not address the presence of the harmonic series at this point in his book, nor give any acceptable account of how such music works. He, instead, moves straight to the charge of intellectualism, where people claim

that new music springs from the head, not from the heart or the ear; or likewise, that the music is not sonorously imagined but only worked out on paper. [...] To claim, then, that important modern music is more intellectual and less feelingly imagined than traditional [tonal] music is merely a projection of incomprehension.²⁴

Further on, Adorno seems bewildered by the perception that a work by Tchaikovsky expresses more emotion than, for example, Schoenberg’s *Erwartung*.²⁵ When Adorno returns to the issue of tonality (in the chapter ‘Schoenberg and Progress’), one is reminded of a line from Messiaen when he says that a very fine ear can hear an augmented fourth.²⁶ Adorno’s argument below may be scientifically accurate, but one is still drawn to Messiaen’s ‘fine ear’, and the implication that this is an above-average functioning organ. Inherent in Adorno’s polemic is that if he can hear it, we should all be able to hear it:

²³ Theodor W. Adorno, *Philosophy of Modern Music*, (1949) trans. by Anne Mitchell & Wesley Blomster (Shed & Ward: London, 1973), pp. 11–12.

²⁴ Theodor W. Adorno, *Philosophy of New Music*, trans. and ed. by Robert Hullot-Kentor (University of Minnesota Press: Minneapolis & London, 2006), p. 13.

²⁵ Adorno, Hullot-Kentor, p. 14.

²⁶ Olivier Messiaen, *Technique de mon langage musical*, trans. by J. Satterfield (Paris: Leduc, 1944/56), I, p. 47.

Music knows no natural law, and this fact accounts for the dubiousness of all psychology of music [...] an ontological law is on no account to be attributed to the tonal material in itself, or to what has been filtered through the system of temperament. However, this is precisely what occurs in arguments that want to conclude, for instance—whether on the basis of the physiology of the ear or the relation of overtones—that the triad is the necessary and universal condition for any possible musical understanding and therefore that all music must be committed to it. [...] It is given the lie by the observation that the developed ear can grasp the most complicated overtone relations harmonically with just as much precision as it can the simpler relations.²⁷

It is not my intention to pursue this line of thought,²⁸ as it is beyond the scope of this thesis, but I will return to the issue of musical language (in Chapter 2) and Adorno's polarising of Schoenberg and Stravinsky (towards the end of this chapter). Inherent in the Tchaikovsky/Schoenberg expression debate mentioned above is another more fundamental issue: society's understanding or misunderstanding of what constitutes a work of art. Strongly linked to this is the pressure, once again, to be original. Although Adorno does not use this word at this stage, his quotation from Hegel strongly invokes it:

What through art or thinking we have before our physical or spiritual eye as an object has lost all absolute interest for us if it has been put before us so completely that the content is exhausted, that everything is revealed, and nothing obscure or inward is left over any more. For interest is to be found only in the case of lively activity [of mind].²⁹

Moving on from Adorno for now (and acknowledging that I am at odds with him), I will continue with my original argument, which deals with the evolution of musical language. In non-tonal music the natural laws of harmony no longer apply. As a result, a dissonance is no longer that: it has nothing to be dissonant from, although to the average listener the never-ending dissonances in modern music will just feel like never-ending dissonances. This implies that the rationale or theory behind non-tonal music is different. By the time Schoenberg had refined his theory of composing with all twelve tones and created 'serialism', the rationale was that all twelve tones were equal. Thus, a theory had been posited: the next stage is to put this theory into practice, through technique. The

²⁷ Adorno, Hullot-Kentor, pp. 31–32.

²⁸ Adorno goes on to suggest that tonal sounds are antiquated and, ultimately, they no longer fulfill their function. He even riles against Sibelius, suggesting that when a composer 'makes do entirely with tonal resources, they sound just as false as do the tonal enclaves in atonal music'. (See Hullot-Kentor pp. 32–33).

²⁹ Adorno, Hullot, p. 15 citing Hegel, *Aesthetics: Lectures on Fine Art*, trans. by T. M. Knox (Oxford: OUP, 1975), 1:606.

combination of theory and technique gives the music its *raison d'être* and, by implication, its justification.

Richard Toop discusses the issue of style/language and its relationship to theory in his chapter 'Against a Theory of Musical (New) Complexity'.³⁰ Toop is critical of Hindemith's *Unterweisung im Tonsatz* [*The Craft of Musical Composition*] (in fact, he describes it as a 'disaster') and sees a 'decline in melodic and harmonic invention from the mid-1930s onwards which can be persuasively linked to the restrictive criteria proposed in the book [Hindemith's]'.³¹ Although less critical of Messiaen's theory (with reference to Messiaen's *Technique de mon langage musical*), Toop questions whether this is more a statement of practice than a theory. It is not a theory, according to Toop, because its concentration on pitch is something that Messiaen would 'regard as exhausted just a few years later'.³² However, it should be noted that Messiaen used the word 'technique', not 'theory' in his title, and there is a difference. The technique may be a working out of a theory, just as Schoenberg's or Webern's approaches to serialism are technical manifestations of an underlying fundamental theory.³³ Chapter 4 will examine Messiaen's musical language (its constituent parts) but I, like Toop, am not convinced that this is a 'theory'; but neither do I think that Messiaen saw it as a theory. Toop concludes his chapter by urging composers to be wary of theory. He posits that the demise of traditional serialism resulted from 'the systematic exposition of its total resources. Suddenly, everything was there; you could no longer discover, only select [...] I would be inclined to describe theory as the gravestone of musical invention [...]'³⁴

An earlier chapter in the same book somewhat contradicts Toop's assessment of the situation. Hugues Dufourt acknowledges that the creative act

³⁰ Richard Toop, 'Against a Theory of Musical (New) Complexity', in *Contemporary Music*, ed. by Deliège and Paddison, pp. 89–97.

³¹ Toop, p. 95.

³² Ibid., p. 96.

³³ It is important to remember that Schoenberg's serial technique was not written down and he always considered it to be flexible. Writing in 1953 Krenek observed that 'dodecaphonic theory [...] does not claim to be a "system", but a technique.' For Krenek, a 'system' is a 'set of statements arrived at through examination of the nature of the musical material and claiming absolute validity on the strength of its quasi-scientific background. A "method" or "technique" presents statements of an advisory character.' See Ernst Krenek, 'Is the Twelve-Tone Technique in Decline', *The Musical Quarterly*, 39 no. 4 (1953), 513–27 (p. 515).

³⁴ Toop, p. 97.

in serialism is a ‘synthetic activity’, but that the composer is more than a mere arranger: ‘Music creation is not the result of the combination of parts, but a product that unites the parts’.³⁵ He suggests that those of the Darmstadt school³⁶ took the initiative in fostering a rigorous theoretical initiative: ‘Under the influence of mathematical logic the serial composers tried once and for all to systematize the technical aspects of music, to propose a form of logic, and to organize their thinking by analysing concepts’.³⁷ Further on he says: ‘By proclaiming the equality of the parameters of musical discourse, serialism has done away with hierarchy and replaced it by parametrical complexes. The decisive change is due to Messiaen.’³⁸ This decisive change may well be due to Messiaen, but Messiaen himself also had to change; accounting for and assessing this change is one of the key purposes of this thesis. No one would suggest that Messiaen’s idiosyncratic language crystallised by the early 1940s paved the way for a new *lingua franca* but this thesis will show that some of the most radical aspects of the ‘experimental’ works have antecedents in earlier works. Meyer sees ‘generality’ not ‘idiosyncrasy’ of language as more suitable for replication and progress. He gives an example of those who followed Debussy’s harmonic style (but without mentioning Messiaen) and suggests all they can do is mimic (‘succeeded in parroting’); Meyer regards Debussy’s language as ‘negatively derived’ because it avoided ‘progressions normal in the harmonic syntax of tonal music’; as a result his harmonic language ‘cannot be generalised and cannot, through replication, be influential in shaping the development of new harmonic constraints’.³⁹

The purpose of any language is to communicate so the history of music is also a history of the evolution of its language. It may not speak to us in such concrete terms as the written word, but speak to us it does in some form. When composers operate outside of what is perceived to be the language of the time, difficulties can arise. Messiaen fits neatly into this category and he was composing at a time when people had no hesitation in voicing or printing their

³⁵ Hugues Dufourt, ‘The Principles of Music and the Rationalization of Theory’, in *Contemporary Music*, ed. by Deliège and Paddison, pp. 19–48 (p. 44).

³⁶ The importance of Darmstadt as a beacon for the avant-garde will be discussed in Section 1.4.

³⁷ Dufourt, p. 41.

³⁸ *Ibid.*, p. 42.

³⁹ Leonard B. Meyer, *Style and Music: Theory, History and Ideology* (Philadelphia: University of Pennsylvania Press, 1989), p. 140.

vitriolic views on his music. In addition to the ‘Le cas Messiaen’ that developed in the mid 1940s, René Leibowitz (one of the torchbearers and advocates for seeking a universal language) was scathing of those who created their own language; his critique of Messiaen will be discussed in Chapter 3. The difficulty for the music world is that if no one understands your language, nothing intelligible will be communicated: this may even have been Messiaen’s explicit intention in the *Cinq rechants* (to be discussed in Section 1.5). Indeed, it is tempting to suggest that composers who invent their own language are talking to no one but themselves; the very fact that Messiaen wrote the *Technique de mon langage musical* shows that he was keenly aware that some form of explanation was needed.

Some of the historical events to be recounted in the next section will allude to how and why the musical world had to renew itself after humanity’s failings during World War II. To conclude this section I will return to Adorno’s *Philosophy of New Music*. Of course care must be taken when relying on sound bites or over-generalisations to make a point, but one of the central tenets of Adorno’s philosophy is that Schoenberg is seen as a progressive composer, and Stravinsky as a reactionary composer.⁴⁰ Adorno wrote the section on Schoenberg in 1941 and the section on Stravinsky in 1948; the introduction to the book was written after both main sections were completed. Ironically, the book was written by a European (then living in America) about Europeans (Stravinsky became a French citizen in 1934) who were also in living in America. Adorno’s views are important as they foreshadowed the re-elevation of Schoenberg and the denigrating of Stravinsky’s neoclassical works after the Second World War. Describing Stravinsky’s neoclassical scores as ‘sterile’, Adorno suggests that ‘the desire of the adolescent is ever stubbornly at work; it is the struggle of youth to become a valid, proven classicist—not a mere modernist—whose substance is consumed in the controversy of artistic party lines; and who is soon forgotten.’⁴¹

⁴⁰ Joseph Straus (and many other writers on the subject, including René Leibowitz), notes that Schoenberg realised that history required ‘progress’. Straus continues: ‘Music is in a continuous process of evolution. It is the composer’s task to comprehend the historical trend and keep it going in the proper direction’. See Joseph N. Straus, *Remaking the Musical Past: Musical Modernism and the Influence of the Tonal Tradition* (Cambridge, MA: Harvard University Press, 1990), p. 7.

⁴¹ Adorno, Mitchell, p. 137.

Adorno is not just critical of Stravinsky's classical endeavours. With *Pierrot Lunaire* as a benchmark, Adorno takes issue with Stravinsky's lack of subjectivity in *Petrouchka* and *Le Sacre*. In *Petrouchka* 'the music does not identify with the victim'; in *Le Sacre* the 'sacrifice without tragedy results in music that accompanies but does not comment on the atrocities on stage.'⁴² The implication of Adorno's argument is that Stravinsky is emotionally detached from all his works.⁴³ The fact that Stravinsky would eventually embrace serialism is indicative of just how powerful and influential the new generation of composers would be after 1945. That a seventy-year-old man would radically change his composition style is in no small part due to the 'low value placed on his music by outspoken members of the younger generation of avant-garde composers'.⁴⁴ This same quotation could just as easily be applied to Messiaen, who encountered relentless attacks on his music in the 1940s (and beyond). Although Stravinsky developed his own serial style, he was initially influenced by Schoenberg; but, like many other composers who started with Schoenberg, Stravinsky disliked the 'emotion and excess' in Schoenberg and became attracted to the sparseness, transparency, and contrapuntal simplicity of Webern's music.⁴⁵

When the book was published in 1949 (just as Adorno was returning to Europe after some fifteen years in exile), many of the key events (such as the composition of *Mode de valeurs*) had already taken place. But the influence of *Mode de valeurs* would not be felt until 1951 when Goléa brought a recording to Darmstadt. Coincidentally, Schoenberg was due to teach in Darmstadt that year but was too ill to fulfil that engagement: who else but Adorno took his place. Boulez recalls that Adorno was not well known in Paris in the late 1940s and that he only met Adorno for the first time in 1952.⁴⁶ When Boulez was asked what influence Adorno had exerted on the avant-garde, he replied that the influence was the other way around: the avant-garde had influenced Adorno. Boulez also

⁴² Ibid., pp. 143, 145, 147.

⁴³ For an assessment of Adorno's three critiques of Stravinsky see Max Paddison, 'Stravinsky as Devil: Adorno's Three Critiques', in *The Cambridge Companion to Stravinsky*, ed. by Jonathan Cross (Cambridge: Cambridge University Press, 2003) pp. 192–203. Paddison concludes that Adorno's first critique of Stravinsky (1928/32) was largely positive but that it played its part in the eventual demise of neoclassicism (see pp. 192–95).

⁴⁴ Joseph N. Straus, 'Stravinsky, the Serialist', in *The Cambridge Companion to Stravinsky*, pp. 149–74 (p. 149).

⁴⁵ Straus, pp. 153–54.

⁴⁶ Walters, pp. 312–13.

makes it clear that even by 1954 much of Adorno's writings were only available in German. Boulez described Adorno (the composer) as 'second-rate' but acknowledged his 'extraordinary intelligence [...] simply looking at our scores (although Stockhausen reproached him for not studying them carefully enough), he realized that what we were doing was the consequence, unforeseen by him but logical, of what he already knew.'⁴⁷

One of the subsections in the chapter 'Schoenberg and Progress' in Adorno's book has the title 'Total Organization of the Elements'. Although the title seems prophetic, in the context of total serialism that evolved after *Mode de valeurs*, Adorno was actually referring to traditional serialism. He talks about how the various parameters of music developed independently from one another in previous centuries and that 'Later, a common denominator for all musical dimensions is sought. This is the origin of the twelve-tone technique.'⁴⁸ At around the same time that Adorno was formulating his philosophy on modern music, Leibowitz was publishing books on the Second Viennese School (see Chapter 3). But there is a crucial difference in what both men were promulgating. Leibowitz saw the future of music as maintaining what Schoenberg, Berg and Webern had done. When Boulez changed allegiance from Messiaen to Leibowitz he quickly realised that Leibowitz was stuck in the past (this is discussed in Chapter 3). To his credit, Adorno, on the other hand, realised that serialism was but one part in music's long evolution. To that end, he says

'[...] music must emancipate itself as well from twelve-tone technique. [...] this is to be accomplished through the absorption of twelve-tone technique by free composition and of its rules by the critical ear. Only from twelve-tone technique can music learn to remain master of itself, but only if it does not become its slave.'⁴⁹

These words surely foreshadow all the problems that would arise with the earliest attempts at total serialism, which resulted in works enslaved by mathematics and automatism.

⁴⁷ Pierre-Michel Menger, 'From the Domaine Musical to IRCAM: Pierre Boulez in Conversation with Pierre-Michel Menger', *Perspectives of New Music*, 28 no. 1 (1990), 6–19 (p. 9).

⁴⁸ Adorno, Hullot-Kentor, p. 45.

⁴⁹ *Ibid.*, p. 89.

1.4 Cultural, Political and Musical Developments in the 1940s

Just as the 1940s was a tale of two halves for Messiaen (to be discussed in Chapter 2), so too in the wider musical world dramatic changes would ensue after the end of the war. When the Nazis came to power they instigated a series of draconian measures that would have a colossal impact on all the arts. An editorial, which appeared in England in 1938, demonstrates that even before the war such policies were at an advanced stage:

The president of the Reichsmusikkammer, Dr. Peter Raabe, has decided that a testing department be established in order to protect German musical culture from bad or undesirable music from abroad. From now on, it is forbidden to introduce or diffuse music that has not been passed by this department.⁵⁰

Since the Nazis had an iron grip on their own country by 1938, which resulted in many composers and intellectuals (not just Jews) leaving or being expelled, this meant that the German people were subjected to a diet of the German masters up to and including Wagner. Of particular relevance to this thesis is the Nazi's stance on serialism. Despite Schoenberg's heritage and his declaring that twelve-tone composition would guarantee 'the supremacy of German music for the next hundred years',⁵¹ the Nazis took the view that the twelve-tone system was 'equivalent to Jewish levelling down in all other matters of life.'⁵² When the Nazis began their quest for European domination it was inevitable that similar restrictions would be applied in other territories. It is therefore easy to understand why there was a dearth of serial or atonal music in the concert hall or in the publishing houses.⁵³ Therefore, in the 1940s, many concerts in Paris were dominated by the Austro-German masters and some neoclassical works. The Nazi's views on neoclassicism were mixed. According to Christopher Fox, the 're-appropriation of the past was desirable if it furthered the myth of the German

⁵⁰ Editorial, 'Musical Notes from Abroad', *The Musical Times*, 79 no. 1143 (1938), 386. As an aside, Richard Strauss was the first President of the Reichsmusikkammer in 1933.

⁵¹ H. H. Stuckenschmidt, *Arnold Schoenberg* (London, 1959), p. 82 cited in Erik Levi, 'Atonality, 12-Tone Music and the Third Reich', *Tempo*, 178 (1993), 17–21 (p. 18).

⁵² Herbert Gerick and Theo Stengle, *Lexikon der Juden in der Musik* (Berlin, 1943), p. 246, cited in Levi, *Ibid.* Richard Taruskin suggests that the Nazi's cultural policies were slightly more nuanced and makes the point that there had been 'an officially tolerated Nazi school of twelve-tone composers; nor were all twelve-tone composers anti-Nazi.' He reiterates that Schoenberg's music was banned because he was Jewish; the main thrust of Nazi censorship was to ban works that could not be used for cultural propaganda. See Taruskin, *Music in the Twentieth Century* (Oxford: Oxford University Press, 2010), p. 17.

⁵³ For more information on the dissemination of Nazi policies on music in the late 1930s, see Michael Bell, 'Music in Nazi Germany', *The Musical Times*, 79 no. 1140 (1938), 99–101.

master-race, [...] but not if, as in Stravinsky's neo-classical scores, it implied an altogether more ironic relationship to earlier times and customs.'⁵⁴

Despite these restrictions, Parisians still managed to hear contemporary music, including several premieres of works by Messiaen. In a fascinating article on a series of concerts in Paris during the war, Nigel Simeone excellently portrays the Parisian spirit to thwart Nazi censorship. He says that it was not just Jewish composers who faced a ban on their music, but any French composer whose music was unpublished:⁵⁵ in other words, music that would not have been vetted by the Reichsmusikkammer. Denise Tual, cited by Simeone, gives a flavour of the restrictions imposed by the Nazis and the society's plans to play banned works:

[...] the Germans had forbidden all new French musical writing. They had also banned all musicians who had not returned to France, such as Stravinsky, Darius Milhaud and Prokofiev, as well as those living in the Free Zone, such as Georges Auric, Francis Poulenc and Jean Français [...] the Germans had outlawed all gatherings of more than thirty to forty people without special permission [...] [The performances would] include a work by a forbidden foreign composer such as Stravinsky [...]⁵⁶

Simeone goes on to say that between February and June of 1943 five concerts took place: all of them by invitation.⁵⁷

According to Christopher Fox, the 8 May 1945 became known as 'Stunde Null', the Zero Hour, 'a term which reflects the social, political and personal condition of the German people at that moment'.⁵⁸ As already mentioned, Leibowitz played a prominent role in promulgating serial music in Paris in the 1940s, and Sabine Meine sees Leibowitz as one of the pioneers of this 'Zero Hour'. In the final days of the occupation of Paris Leibowitz recorded Schoenberg's Wind Quintet Op.26 in secret and it was subsequently broadcast on French radio after the liberation of Paris.⁵⁹ Boulez heard this broadcast and was

⁵⁴ Christopher Fox, 'Music after Zero Hour', *Contemporary Music Review*, 26 no. 1 (2007), 5–24, (p. 8).

⁵⁵ Nigel Simeone, 'Messiaen and the Concerts de la Pléiade: "A kind of Clandestine Revenge against the Occupation"', *Music and Letters*, 81 no. 4, 551–84 (p. 551).

⁵⁶ Denise Tual, *Itinéraire des Concerts de la Pléiade*, Bibliothèque Nationale de France Rés. Vm, dos. 70, cited in Simeone, 'Concerts de la Pléiade', p. 553.

⁵⁷ Simeone, 'Concerts de la Pléiade', p. 556. For a full list of the works played at each concert see Appendix 2 of Simeone's article.

⁵⁸ Fox, p. 6.

⁵⁹ Sabine Meine, "'Schönberg ist Tot' Es lebe Schönberg!: René Leibowitz – Ein Pionier der "Stunde Null" im Spannungsfeld von Fortschritt und Tradition', *Das Orchester: Zeitschrift für Orchester und Rund-Funk-Chorwessen*, 44 no.2 (1996), 16–21 (p. 16–17).

so curious about the music that he decided take lessons from Leibowitz (see Section 3.2 for more details on this). Two years later Leibowitz organised a festival of music devoted to the works of Schoenberg, Berg and Webern; interestingly, Messiaen was in the audience for the performance of Webern's Op.21 Symphony, conducted by Leibowitz.⁶⁰ As a result of Leibowitz's endeavours, by 1947 Paris was the leading centre for performances of serial music. This same year would also see the first performance of a work by Schoenberg at the new festival of contemporary music in Darmstadt (thanks to Leibowitz). As will be seen shortly, the increase in performances of works by the Second Viennese School in Darmstadt would result in a geographical relocation of the avant-garde from Paris to Darmstadt.

Leibowitz's obsessive insistence of the imperative of serialism (which will be discussed in detail in Chapter 3) does not sit well with Richard Taruskin. Taruskin quotes Leibowitz saying that this great renewal 'can't happen without a violent reaction', words that Taruskin finds 'chilling' and 'reminiscent of Goebels, Hitler's Minister of Propaganda'. This is probably reading a little too much into the situation but Taruskin teases out a very interesting point with regard to the new generation of composers:

Those who looked to the future in the defeated parts of Europe saw the present as a *Stunde Null*, a 'zero hour', meaning a time without a past. The necessity to start from scratch, to reject the past in its totality as something tainted if not actually destroyed in the Holocaust of World War II, was a watchword.⁶¹

The revitalisation of serial music received a major boost with the founding of the Darmstadt summer school (to be discussed further, below). One of the consequences of this was that a new hierarchy of 'acceptable' music emerged; Taruskin sees this as having overtones of Nazi suppression. Two examples will suffice: Taruskin recalls Leibowitz declaring that Bartók had compromised himself during the war with his Concerto for Orchestra;⁶² Taruskin is also critical of Boulez's rhetoric, which (he suggests) has Nazi resonances. According to Henze (who referred to Boulez as being the new leader), unless the music was written in a Webernian style, Boulez was not interested: 'Just imagine: it was

⁶⁰ Jean Boivin, *La Classe de Messiaen* (Paris: Christian Bourgois, 1995), p. 62.

⁶¹ Taruskin, p. 18

⁶² *Ibid.*, p. 19. See also Chapter 3 for further information on Leibowitz's numerous attacks on other composers.

being bureaucratically determined how people should compose, in which style and according to which criteria'.⁶³

Henze's comments refer to a time when Boulez was a major figure at Darmstadt (the early- to mid-1950s). The importance of the courses and performances at Darmstadt cannot be underestimated, as they were integral to the further dissemination of traditional serialism and the birth of total serialism. What follows below is a brief overview of the development of the Darmstadt festival. The Internationale Ferienkurse für Neue Musik at Darmstadt was founded in 1946 by Wolfgang Steinecke and Ludwig Metzger. According to Joan Peyser, the first two years of the festival were dominated by neoclassicism with a particular emphasis on works by Stravinsky, Hindemith and Prokofiev. The 1947 summer school saw the first performances of works by Schoenberg, and in 1948 Leibowitz was invited to teach and give lectures at the course. Leibowitz agreed only if he could conduct an entire programme of Schoenberg. In total, Leibowitz gave eight lectures on Schoenberg and serialism.⁶⁴ Among the works performed were Schoenberg's Piano Concerto (conducted by Leibowitz) and Webern's Piano Variations Op.27.⁶⁵ In 1949 Messiaen was invited to do some teaching but he was still very much in the shadow of Leibowitz, who had brought some of his students (but not Boulez).⁶⁶ It was during his time in Darmstadt that Messiaen started work on *Mode de valeurs*.

Humphrey Searle reported a marked change in emphasis at the 1950 Darmstadt summer course. In particular, he highlighted the increasing prominence given to music by Bartók and Schoenberg at the expense of Hindemith and Nadia Boulanger. Despite Schoenberg's inexorable rise, Searle says that 'there was no particularly doctrinaire attitude prevalent'. Amongst the teachers at the festival that year was Edgar Varèse, whose *Ionisation* (1932) received its European premiere alongside Schoenberg's *A Survivor of Warsaw*.⁶⁷ In these first few years there is a sense of the musical world re-acquainting itself

⁶³ Hans Werner Henze, 'German Music in the 1940s and 1950s', in *Music and Politics: Collected Writings 1953–81*, trans. by Peter Labanyi (London: Faber, 1982) p. 43, cited in Taruskin, p. 23.

⁶⁴ Joan Peyser, *Boulez: Composer, Conductor, Enigma* (London: Cassell & Co., 1976), p. 43.

⁶⁵ Fox, p. 10

⁶⁶ Paul Griffiths, *Modern Music and After: Directions Since 1945* (New York: Oxford University Press, 1995), p. 30. The relationship between Boulez and Leibowitz had turned distinctly unpleasant some years prior to this (see Chapter 3).

⁶⁷ Humphrey Searle, '1950 Darmstadt International Summer School', *Music Survey*, 3 no. 2 (1950), 126–27 (pp. 126–27).

with the recent past. Writing in 1951, Everett Helm sensed an ‘anxiety’ in German musical circles to catch up with contemporary music; in particular, there was ‘a belated concern for 12-tone music; scarcely a concert takes place without the inclusion of one modern work.’⁶⁸ In fact, the original emphasis of the Darmstadt course was on exposing and interpreting this ‘new’ music, rather than providing an outlet for new composers to have their works performed. But, as Fox puts it, ‘the new generation was becoming impatient’⁶⁹ and by 1952 the ‘intellectual climate’ was dominated by Stockhausen, Nono and Boulez.⁷⁰ Works performed in 1952 included Stockhausen’s *Kreuzspiel* and Boulez’s first two piano sonatas. This new intellectual climate did not totally overthrow the past: performances of works by Schoenberg at the festival increased to the point that by 1953 his music formed the corner-stone of the two-week event. Hans Keller, reviewing that year’s festival (which took place from 16 to 30 July), described Schoenberg as the ‘pillar’ of the season, and noted that works by Bartók and Webern were also strongly represented. Keller concludes that ‘The aphorism that Schoenberg is the most-discussed and least-performed composer of our time is beginning to date [...] [The performance of Schoenberg’s Violin Phantasy] aroused long and stormy applause and had to be immediately repeated’.⁷¹

Darmstadt’s location, near Frankfurt, was part of the American ‘zone’ after the end of the war. The fact that this was in the West’s hands was propitious: it allowed for greater freedom of travel and it attracted many composers and performers who had left Europe in the 1930s. It is possible that Leibowitz could have carried the serial cause on his own (albeit by passing the reins to Boulez and others), but we should not underestimate the pivotal role that the émigrés had in furthering the serial cause. Without them, I suspect that the pace of change would have been more sedate. We need only contrast the progressive intellectual climate nourished and fostered at Darmstadt with what was happening in the zones that were under Russian control after the war. It would appear that the people of East Germany, and countries in the Russian ‘zone’, got one dictator for another. Ironically, Richard Taruskin notes that during the war Russian artists faced fewer restrictions than their European

⁶⁸ Helm, ‘Current Chronicle: Germany’, (p. 101).

⁶⁹ Fox, p. 12.

⁷⁰ Griffiths, *Modern Music*, p. 41.

⁷¹ Hans Keller, ‘New Music at Darmstadt’, *The Musical Times*, 94 no. 1328 (1953), 476.

counterparts. Then in January 1948, through a series of ‘political hearings’, Shostakovich, Prokofiev and others were accused of ‘elite modernism [...] something that the doctrine of socialist realism expressly forbade.’⁷²

The dissemination of serialism and other contemporary music previously labelled as ‘degenerate’ was not confined to the Darmstadt summer school; for example, over four days in May 1949 the First Congress of Dodecaphonic Music took place in Milan. Schoenberg sent a telegram, which read as follows: ‘Proudly, I greet my companions who aim to present musical ideas with new tools of musical logic – good luck!’. In addition to works by Schoenberg (the *Piano Suite* Op.25), the congress also provided a platform for the performance of works by younger composers (for example, Dallapiccola’s *Cinque Frammenti di Saffo*, composed in 1942).⁷³ 1950 saw the revival of the Donaueschingen festival, which was fronted by Heinrich Strobel.⁷⁴ Strobel assumed responsibility for this as part of his duties on being appointed head of music for the Südwestfunk in Baden-Baden.⁷⁵ The annual October weekend of concerts at Donaueschingen soon became one of the most important public events in the new music calendar.⁷⁶ Both Boulez and Messiaen had works performed at Donaueschingen (with varying degrees of critical success: see Section 1.5). Messiaen’s *Réveil des oiseaux* was premiered there in 1953, followed eight years later by *Chronochromie* (a work commissioned by Strobel).

It would be wrong to assume that the renaissance of serial music after the war resulted in its immediate acceptance by the public, and, as already noted, it did not ‘saturate’ Darmstadt in the first few years after the War. Back in Paris, despite much of the music being ten to twenty years old, the serial music of the Second Viennese School still seemed radically new to audiences. Frederick Goldbeck, writing in *The Musical Quarterly* in 1949, lamented the Parisian public’s reaction to Webern’s Chamber Concerto and Cantata both conducted by

⁷² Taruskin, pp. 8–9. Taruskin notes that composers in Eastern Europe and Russia became isolated and were ‘forced to turn back the stylistic clock’ (p. 11).

⁷³ Nicolas Slonimsky, *Music Since 1900*, 4th edn (London: Cassell, 1971), p. 876.

⁷⁴ Between 1950 and 1960 the Donaueschinger Musiktage für Zeitgenössische provided a platform for both the assimilation of Viennese serial music and performances of new music by emerging composers (many of whom were experimenting with total serialism). Strobel was responsible for the artistic direction of the festival until 1970.

⁷⁵ The Südwestfunk (administered by the French) was one of two broadcasting corporations in southwest Germany after World War II.

⁷⁶ Griffiths, *Modern Music*, pp. 35–36.

Désormière. He writes, ‘Either the listener accepts Webern’s message – an allusion, written in shorthand, rather than a message – and feels moved by the extreme romanticist’s humility and sumptuous asceticism [...] or else the listener hears nothing but disconnected, or worse, artificially connected counterpoint.’⁷⁷ This perceived ‘asceticism’ in Webern is what attracted the next generation of composers. This quest for a *lingua franca* (the evolution of which can be traced through Webern, and with Messiaen’s *Mode de valeurs* as the catalyst) was over almost as soon as it started. With Boulez and Stockhausen as the torchbearers of the avant-garde in Europe (in the 1950s), total serialism paradoxically opened a seemingly fruitful thoroughfare but it was a path that (with hindsight), at worst, turned out to be a cul-de-sac and, at best, ended up having multiple junctions and forks in the road.

Writing in 1969, Wolf-Eberhard von Lewinski discusses what has happened to those who led the way in the mid-1950s; he noted that ‘the avant-garde troika of that period, Pierre Boulez, Karlheinz Stockhausen, and Luigi Nono, have gone their own separate ways to the point where they are completely alienated from one another.’ Lewinski goes on to say that he regards Boulez as being ‘sceptical’ towards composition in general; that Nono no longer represents the avant-garde because he conserves and repeats ‘previous methods of composition’; but that Stockhausen’s ‘élan in composition [...] has diminished the least. He succeeded in deriving the widest possible esthetic horizon from a rather small ideological base’.⁷⁸ With no unified approach, composers pilfered ideas and concepts, and journeyed down paths that became idiosyncratic and individualistic, i.e. paths of their own making. The irony of this is that, with the composition of *Mode de valeurs*, Messiaen effectively (but temporarily) abandoned his highly individualistic compositional language, which had been the subject of endless criticism in the 1940s (see Chapter 2).

⁷⁷ Frederick Goldbeck, ‘Current Chronicle’, *The Musical Quarterly*, 35 no. 2 (1949), 312–13 (p. 312). The part of the quotation omitted reads: ‘it is no mean tragedy and no mean privilege to be Bach’s and Beethoven’s and Wagner’s and Mahler’s heir, and to feel that everything worth saying having been said, nothing is left to do but echoing and contradicting, in a few fantastic whispers, the ancestor’s mighty voice’. Goldbeck is keenly aware of the weight of history and the anxiety of influence that besets composers.

⁷⁸ Wolf-Eberhard von Lewinski, ‘Where do we go from here? A European View’, *The Musical Quarterly*, 55 no. 2 (1969), 193–205 (pp. 195, 196).

As Europe emerged from years of tumult, Messiaen was embarking on his final ‘project’ before his musical language would undergo a critical reappraisal. The final section of this chapter will briefly consider two of the three works that make up the ‘Tristan Trilogy’. Its purpose is to give the reader a sense of the peculiar combination of forward- and backward-looking material, something that will feature strongly in the works of 1949 to 1952.

1.5 Messiaen: ‘The Traditional Modernist’

The radical nature of *Mode de valeurs* is all the more telling when placed in the context of what preceded it. The epithets ‘modernist’ or ‘avant-gardist’ do not readily spring to mind when trying to label or categorise Messiaen as a composer, but I have woven them subtly into this chapter. Madeleine Hsu, in her detailed study of the influence of Liszt, Debussy and Bartók on Messiaen, is more emphatic on the matter and says that ‘Messiaen’s music exemplifies much of the early twentieth-century European avant-garde culture, which gave more attention to the irrational and mystical than to the rational’.⁷⁹ Without getting bogged down in a debate over terminology, I would suggest replacing ‘avant-garde’ with ‘modernist’ in Hsu’s quotation.⁸⁰ It can be argued that some of Messiaen’s works prior to 1949 (particularly *Harawi*, to be discussed below) exhibit both ‘modernist’ and ‘anti-modernist’ traits: Messiaen’s eternal bidirectional approach to music, which looks forwards and backwards at the same time.

In the 1930s Messiaen composed two song cycles for his wife Claire Delbos: *Poèmes pour Mi* and *Chants de terre et de ciel*. In the 1940s Messiaen became interested in the ‘Tristan’ myth, particularly in the idea of a fatal and irresistible love, which can only lead to death. During this period, Messiaen’s wife Claire became unwell (physically and mentally), and Messiaen was becoming closely acquainted with an extraordinary pianist, Yvonne Loriod. The first work in the ‘Tristan Trilogy’ was the song cycle *Harawi*. For now, a brief discussion of its central movement will serve as an example of ‘where Messiaen was’ musically in the mid-1940s; retrospectively, we will then see just how

⁷⁹ Madeleine Hsu, *Olivier Messiaen, the Musical Mediator: A Study of the Influence of Liszt, Debussy, and Bartók* (London: Associated University Press, 1996), p. 21.

⁸⁰ For the purposes of this thesis, my use of the term ‘avant-garde’ relates to developments in music post World War II.

radical a departure *Mode de valeurs* would be. It is beyond the scope of this thesis to discuss the work in detail, so I will confine myself to a few points. *Harawi* sees Messiaen engage with subject matter of a surrealist nature. Insofar as Messiaen's works up until now had clear meanings or programmes (usually spelt out by Messiaen), this work is much more ambiguous; discerning any fine line between reality and fantasy is difficult.

Peter Hill and Nigel Simeone deal with the delicate matter of who or what the song cycle might be about. Unusually, for Messiaen, the score contains very little extra information or commentary, although Messiaen has acknowledged the influence of a painting (*L'Île Invisible*) by the surrealist artist Roland Penrose. The first performance took place at a private concert on 26 June 1946; there was no commentary in the programme but there was a cover design by Picasso of the *Three Graces*.⁸¹ Messiaen's reluctance to provide detailed 'programme' notes may have arisen because of some of the negative reaction to the 'commentaries' that accompanied the *Trois petites Liturgies* and the *Vingt regards*.⁸² In addition, given the work's surrealist text, any attempt at providing a detailed programme would utterly negate the surrealist aesthetic. Despite this, Philip Weller (drawing on Messiaen's later writings in the *Traité*: 'First Gaze—Union—Death') provides a very short description of each of the movements.⁸³ What is clear, though, is that the work is a move away from the unashamedly Christian or Roman Catholic concepts seen in earlier works. Despite this, Robert Sholl argues that Messiaen is still trying to bring humanity to God, albeit it on humanity's terms (through a modernist approach).⁸⁴ According to Hill and Simeone, Antoine Goléa was of the opinion that 'in *Harawi*, the symbolism of a young woman and of springtime would seem to indicate that he [Messiaen] was composing a kind of love poem to his young muse, Yvonne Loriod.'⁸⁵ Although Messiaen and Loriod would eventually marry, most scholars are firmly convinced that

⁸¹ Peter Hill and Nigel Simeone, *Messiaen* (New Haven and London: Yale University Press, 2005), p. 168.

⁸² Hill and Simeone, p. 156. This will be discussed in more detail in Chapter 2.

⁸³ See Philip Weller, 'Messiaen, the *Cinq Rechants* and "Spiritual Violence"', in *Messiaen Perspectives I*, pp. 279–312 (p. 308). Weller compiles the programme from information in *Traité*, I, p. 151 and III, pp. 279–81.

⁸⁴ See Robert Sholl, 'The Surrealist poetics of Messiaen's *Harawi*', in *Messiaen Studies*, ed. by Robert Sholl (Cambridge: Cambridge University Press, 2007), pp. 34–62 (pp. 42–43).

⁸⁵ Hill and Simeone, p. 157.

Messiaen remained utterly faithful to Claire throughout her very long illness.⁸⁶ In an attempt to mollify the tone of Goléa's views on *Harawi*, Hill and Simeone suggest that the song cycle is about Claire:

Seeing Claire as the subject of *Harawi* explains the work's mood of almost unbearably passionate lament. The parting of the lovers comes not at the end but at the midpoint of the cycle [...] But for Messiaen death was not the end, and in the ninth song, the lovers are reunited and the music celebrates ecstatically.⁸⁷

Christopher Dingle suggests that *Harawi* was an 'escape' for Messiaen and that it heralds not one but three changes in Messiaen's musical language (the others being the experimental works and then the retreat into nature).⁸⁸ Sholl suggests that '*Harawi* can be considered as a cathartic and consolatory work: a refuge from, and an expression of, Messiaen's love for his first wife [...], and a sublimation of his burgeoning admiration for Yvonne Loriod [...].'⁸⁹ Sholl also suggests that the work is more than just 'the revelation of subconscious desire; [...] Messiaen attempts to re-orient the Kantian displacement of God by the sublime'.⁹⁰ The modernist aspect of the work is to be found in the surrealist texts, which lend themselves very well to Messiaen's already-established musical language. Sholl highlights several complex musical examples of a modernist nature,⁹¹ but for the purpose of this discussion I will single out one recurring theme, which appears in the second, seventh and final (twelfth) songs. This theme has a prequel in recorded organ improvisations for Lucien Fabre's play *Tristan et Yseult*. The 'Thème d'Amour' 'is none other than the great cyclic melody which dominates *Harawi* (notably in 'Bonjour toi, colombe verte' and 'Adieu')'.⁹² Ex.1.1 reproduces the theme at the start of song seven (the 'midpoint of the cycle', referred to by Hill and Simeone, above):

⁸⁶ See Christopher Dingle, *The Life of Messiaen* (Cambridge: Cambridge University Press, 2007), pp. 99–102.

⁸⁷ Hill and Simeone, p. 158.

⁸⁸ Dingle, *The Life of Messiaen*, p. 101.

⁸⁹ Sholl, p. 38.

⁹⁰ *Ibid.*, p. 39.

⁹¹ See Sholl, pp. 46–53.

⁹² Hill and Simeone, p. 143.

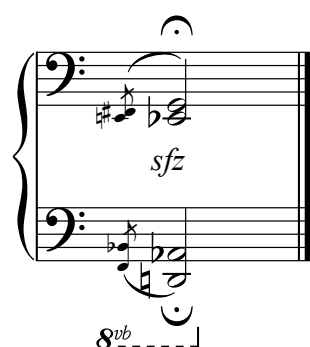
Ex. 1.1 *Harawi*: ‘Adieu’, bb. 1–4

Très lent, solennel et très soutenu

A - dieu toi, co - lom - be ver - te, Ange at - tris - té.

The ‘passionate lament’, mentioned by Hill and Simeone, is superbly evoked here in a modernist sense: the surreal text addresses his beloved as a ‘green dove’ and a ‘sorrowful angel’; the use of diatonic chords (and a sublimely altered plagal cadence $\sharp IV-I$) is in stark opposition to the typical Messiaen chords seen in bar 4, which gives the impression of the music simultaneously looking forwards and backwards (a common theme of this thesis). Although large parts of ‘Adieu’ are harmonically grounded in Messiaen’s Modes of Limited Transposition, this opening refrain is surely one of the most ‘tonal’ themes in his entire output. This recurring theme (heard four times) stands out from the rest of the music in this song (particularly the piano interludes). The very strong grounding in E-flat major permeates the song each time the theme returns. The A major (enharmonically respelt) to E-flat major progression outlines an augmented fourth, an interval associated with the *Tristan* prelude. The final syllable of the song (‘jours’, part of the word ‘toujours’) is harmonised by an E-flat chord; then, at the end of the piano postlude, Messiaen attempts to reiterate the E-flat chord but only states two of its three pitches (E-flat and G), preceding them with chromatic acciaccaturas. The chord is incomplete (lacking the fifth) and is further thwarted by the left hand playing an augmented fourth: D to A-flat (also preceded by acciaccaturas, which outline a perfect fourth (another clear allusion to the *Tristan* chord)). This amalgam is played three times; neither the *Tristan* association nor the comfort of tonality reigns supreme (see Ex. 1.2).

Ex. 1.2 *Harawi: 'Adieu', Final Bar*



The tender, but surrealist, text is in stark contrast to the onomatopoeic non-words and the phonetic use of Quechua words heard in some of the other songs. Although several disparate images are juxtaposed in the poem, the mood or meaning is clear:

*Harawi: 'Adieu'*⁹³

Adieu toi, colombe verte,
Ange attristé.

Goodbye to you, green dove,
Sorrowful angel.

Adieu toi, perle limpide,
Soleil gardien.

Goodbye to you, limpid pearl,
Sun guardian.

Toi, de nuit, de fruit, de ciel, de jour,
Aile d'amour.

You, of night, of fruit, of heaven, of day,
Wing of love.

Adieu toi, lumière neuve,
Philtre à deux voix.

Goodbye to you, new light,
Philter with two voices.

Etoile enchaînée,
Ombre partagée,
Dans ma main mon fruit, de ciel, de jour,
Lointain d'amour.

Star-linked,
Shadow-sharing,
In my hand my fruit, of heaven, day,
Faraway love.

Adieu toi, mon ciel de terre,
Adieu toi, désert qui pleure,
miroir sans souffle d'amour,
De fleur, de nuit, de fruit, de ciel, de jour,
Pour toujours.

Goodbye to you, my heaven on earth,
Goodbye to you, desert which weeps.
Mirror without sigh of love,
Of flower, of night, of fruit, of heaven, of day,
Forever.

⁹³ Messiaen wrote the texts to all the songs. This translation is by Audrey Ekdhal Davidson (and maintains the American English), *Olivier Messiaen and the Tristan Myth* (Westport, CT: Prager Publishers, 2001), pp. 40–41.

The final song ('Dans le noir') begins with the 'Adieu' theme (accompanied by high quiet descending triads in the piano) but concludes with the words that opened the cycle: 'La ville qui dormait'. The piano intones one final E-flat major chord with an added sixth, before quietly adding *pppp* resonances. *Harawi* has its radical/modernist moments, but it also has a foot firmly in the past. In the context of what was to follow in 1949, perhaps these tonal allusions were just as radical for their time. This eclectic style was not lost on Everett Helm, who reviewed a performance of the work at Donaueschingen in October 1951. His review is scathing: he described 'Adieu' as being 'droolingly romantic' and that the fifty-minute duration of the song cycle was about forty-five minutes too long. 'Adieu' and much of *Harawi* must have seemed tame in the context of the other avant-garde works performed. According to Helm, Boulez's *Polyphonie X* provided 'the only scandal' of the festival. It is interesting to see that, even in 1952, Helm could already sense that Boulez was taking his lead from Webern and not Schoenberg who, compared to Boulez, 'is an old fuddy-duddy'.⁹⁴

Harawi was composed in the summer of 1945 and Messiaen completed the remaining works in the 'Tristan Trilogy' (the *Turangalila-Symphonie* and *Cinq rechants*) over the next three to four years. I will return to the *Turangalila-Symphonie* in Chapter 2 (to discuss the circumstances of its composition) and in Chapter 4 (to highlight rhythmic techniques that are symptomatic of Messiaen's research in this area in the 1940s) but will conclude this section with a few comments on the *Cinq rechants*, as the work sits on a precipice: it marks the end of the 'Tristan Trilogy' but looks forward to the more radical works of 1949.

The *Cinq rechants* was a commission from Marcel Couraud, conductor of the National Choir of Radio France, who asked for a piece for twelve virtuoso voices.⁹⁵ Davidson suggests that 'the verse for *Cinq rechants* at times seems here to surpass Surrealism in certain aspects of its disjunctiveness and to approach the pastiche quality of Cubist painting and poetry.'⁹⁶ As a result, it is more difficult to determine or decipher the meaning of the *Cinq Rechants* than *Harawi*. This is in part due to the invented language and perhaps reveals that Messiaen wanted some of his thoughts to remain private. What better way to keep such thoughts

⁹⁴ Everett Helm, 'Current Chronicle', *The Musical Quarterly*, 38 no. 1 (1952), 143–45 (pp. 143–44).

⁹⁵ Dingle, *The Life of Messiaen*, p. 108.

⁹⁶ Davidson, p. 109.

private than through disparate fragments and text that is a ‘stream-of-consciousness’, according to Dingle.⁹⁷ The work returns to the Peruvian folklore of *Harawi*, ‘combining it on this occasion with the mediaeval “alba”, a troubadour song about the parting of lovers at dawn,’ but it also looks to the future: there are ‘hints of a new asceticism in the music and the work concludes with the words “dans l’avenir” (“into the future”)’.⁹⁸ The *Cinq rechants* is, therefore, another example of a work by Messiaen that looks forward and backward: Weller describes the work as a ‘fascinating interaction between the old and the new’. The title and formal layout are indebted to Claude Le Jeune, but ‘aesthetically [it] displays a modernist assertiveness and energy, as well as expressive tension, that are challenging yet infinitely compelling.’⁹⁹ Stylistically there is nothing radically new here, with the possible exception of the use of isolated letters (‘t’ and ‘k’) purely for their phonetic percussive effects. Christopher Dingle recounts events at a concert in April 1968 where several piano works and the *Cinq rechants* were performed alongside a new work by Xenakis (*Nuits*). Messiaen, as the established composer, was widely applauded but the audience starting shouting for Xenakis. Messiaen said to Claude Samuel: ‘You see, twenty years ago they whistled at the *Rechants* because they found them too modern. Now they whistle because they find them not modern enough [...]’¹⁰⁰

In order to assess and understand the change in Messiaen’s aesthetics in 1949, the next chapter will focus on events (and the many criticisms levelled at Messiaen’s music) in the 1940s that contributed to (or influenced) this change in style. As this involves positing influence statements, it is important to establish criteria for testing such assertions of influence. To that end, the chapter will begin with a discussion of theories of influence.

⁹⁷ Dingle, *The Life of Messiaen*, p. 109.

⁹⁸ *Ibid.*, p. 109.

⁹⁹ Weller, ‘Messiaen, the *Cinq Rechants*’, p. 279. Weller backs this up by recounting Couraud’s reaction to the work in which Couraud notes the performance difficulties; Couraud also suggests that its ‘radical modernism [...] come[s] straight from Messiaen.’ (p. 290).

¹⁰⁰ Dingle, *The Life of Messiaen*, p. 178 citing Claude Samuel, *Permanences d’Oliver Messiaen: Dialogues et Commentaires* (Arles: Actes Sud, 1999), p. 135.

CHAPTER TWO

Theories of Influence and Messiaen in the 1940s

2.1 Introduction

To understand the circumstances surrounding the composition of the *Quatre études de rythme* and the *Livre d'orgue*, a historical overview of the years preceding this is important. This thesis will argue that a set of circumstances in Messiaen's life played a major part in shaping his views on music, which, in turn, resulted in a radical shift towards a more ascetic form of composition. Chapter 1 has already alluded to the cultural climate in Paris in the 1940s and how momentum was gathering for a new approach to musical composition. After a very successful start to the 1940s, Messiaen's position gradually became more tenuous, with venomous attacks on his music by the press. 'Le cas Messiaen', as it became known, will be discussed in more detail in Section 2.3.2. Chapter 3 will assess a highly critical article on Messiaen written by René Leibowitz, a conductor, composer, teacher and writer in 1940's Paris. Given Leibowitz's increasingly prominent position in post-war Paris, I will argue that this, too, had an effect on Messiaen. Many years after this period, in some circumspect protestations on the veracity of the criticisms levelled against him, Messiaen attempted to give the impression that none of this affected him. Just as scholars look for musical influences to assess the development of a composer's language, they must also be aware of what was happening in all aspects of the composer's life.

In analysing and understanding the history and evolution of western art music, it is widely accepted that earlier composers—and indeed contemporaries—and their compositions can have a strong influential affect. One of the earliest ways for a composer to learn his trade was by copying out a predecessor's score. For generations (and it still continues today), students were trained in strict species counterpoint, harmony, fugue, Classical forms, etc. in an educational process essentially founded on the principle of learning from the masters. When Boulez first heard a work by Schoenberg, he wanted to know how it was written. The only way of doing this was to find the score or to seek tuition from someone versed in such compositional techniques; Boulez ended up taking

classes with Leibowitz.¹ Scholars are very quick to make sweeping statements about the influences on a particular composer without assiduously checking the veracity of such claims. This is perhaps understandable given that influence is very difficult to measure, let alone detect. In their introduction to Part II of *Messiaen Perspectives*, which deals with influence, Dingle and Fallon describe discussing influence as a ‘tricky business’. A glance at the contents of Part II reveals essays that (for the most part) deal with direct and specific musical influences on Messiaen (see, for example, Weller’s chapter discussed in the previous chapter of this thesis), which, in my opinion are well justified. What the book does not address, nor does it purport to do so, are the influences of people (not their music), events and the cultural climate on Messiaen. In order to avoid getting bogged down in theories of influence, Dingle and Fallon give a hypothetical viewpoint of those who think there is no point in discussing influence because it cannot be conclusively proved: ‘[...] as influence is difficult to prove decisively and cannot be resolutely pinned down in a causal path of ‘a’ influencing ‘b’ on this basis in a clear-cut, exclusive manner, then it is too dangerous to allow it into the mix at all. This is the sterile laboratory approach to music.’² In other words, it is wrong to avoid discussing influence statements just because they can never be proved completely, or scientifically. An influence statement starts as a hypothesis and a small percentage of the conclusion will nearly always remain just that. Rather than trying to apply scientific criteria to determining influences, we should perhaps use a legal analogy: the influence is ‘proven beyond reasonable doubt’.

There are essentially two main types of influence. The first is the direct influence of a particular aspect of a composition on a later work. In the vast majority of Messiaen scholarship that deals with influence it is this type that is being assessed.³ The second type is much more subtle and involves dealing with

¹ See Section 3.2.

² Dingle and Fallon, *Messiaen Perspectives*, p. 213. The authors also provide a long list of studies on Messiaen and influence. Most of these address ‘matters of content’, a theme that will be discussed in Section 2.2.1.

³ See for example Julian Anderson, ‘Messiaen and the Notion of Influence’, *Tempo*, 63 (2009), 2–18, which assesses the influence of André Jolivet on Messiaen. Anderson makes the point that Messiaen was always happy to acknowledge any facets of other music that made their way into his compositions, but ‘Messiaen’s own creative identity was so strongly defined that any other composer’s work was inevitably filtered through his own highly developed ears and musical tastes’. Anderson concludes with the intriguing notion that composers such as ‘Jolivet, Berg

broader issues of language and style, and cultural and political events. There is also an overlap between the two: for example, people who may influence through their compositions and through their actions and writings. Before launching into a detailed discussion of the theory of influence (in order to provide a framework for assessing the influences on Messiaen that contributed to the works of 1949 to 1952), here is an example of a type of influence that demonstrates just how difficult it is to fully appreciate what forces may have been at work in the composition of a particular piece of music.

Consider a composer who studies the late quartets of Beethoven and decides to apply similar compositional procedures (for example, the perpetual development of themes) in his own quartet. A scholar looking for influences may be able to show that the later work is indebted to a particular Beethoven quartet or quartets. However, the hypothesis can only be entertained if the scholar is certain that the later composer was ‘aware’ of these Beethoven’s quartets (‘Awareness’, as a concept, will be discussed shortly). But what happens if the later composer, having absorbed all that the Beethoven quartet has to offer, decides to deliberately negate the earlier piece by obstinately going against its musical argument and ethos? Armed with this information, it would still seem logical to conclude that the Beethoven quartet had an influence on the later work; but, because there is no apparent connection (‘similarity’) between the two works, it is highly unlikely that the scholar would even have looked to Beethoven as a possible influence. Meyer describes such a situation as a ‘negative influence’; he uses the description ‘catalytic’ influence where a composer sees new possibilities from a certain stimulus, but ‘no features of the resulting stimulus are found in the resulting music’.⁴ In assessing whether an influence is present, the initial suspicion is usually aroused if there is some similarity between two works. It might, therefore, seem an impossible task to check for influences between works that are totally dissimilar: the negative or catalytic influences mentioned above. As will be argued below, the overreliance on ‘similarity’ as the primary condition for positing the hypothesis of an

Scriabin and Tournemire metaphorically borrowed the progressions and melodies, ahead of time, from Messiaen.’ (p. 18).

⁴ Leonard B. Meyer, *Style and Music*, p. 143. Platoff suggests the phrase ‘deflecting influence’. See John Platoff, ‘Writing About Influences: *Idomeneo*, A Case Study’, in *Explorations in Music, the Arts, and Ideas: Essays in Honour of Leonard B. Meyer*, ed. by Eugene Narmour and Ruth A. Solie (Stuyvesant NY: Pendragon Press, 1988), pp. 43–65 (p. 51).

influence has created weaknesses and inaccuracies in the discussion of influence in music. In this respect music has fallen behind methods for assessing influence that exist in the fine arts and literature. Therefore, before assessing the influence certain historical events had on Messiaen—and later in Chapter 3, the influence of certain persons/composers on Messiaen's music—it is prudent to establish some parameters or boundaries for defining what determines an 'influence'.

2.2 Influence

Any discussion on how, whether, or why one composer is influenced by another composer, a specific composition or an event must address several fundamental questions. First, 'how do we determine whether an influence has occurred or not?' or, put another way, 'what criteria do we need to apply to justify the claim that a form of influence has taken place?' Second (and of greater importance), 'why did one composer choose composer 'A' or an idea 'X' out of, what on the surface seems like, thousands of possibilities?'

Although examining the role of influence in tonal compositions may at first seem a more straightforward task than investigating influence in much non-tonal music, it too is not without problems. In any examination or comparison of two tonal compositions, a discussion of melodic, harmonic, structural, or even rhythmic relationships would be expected. In practice, aural comparisons based almost exclusively on melodic or harmonic similarities tend to be made; for example, in listening to a piece of music a melodic fragment from another composition can suddenly emerge from one's subconscious. The temptation is to immediately relate the two works and conjecture that the composer of the later work must have known, and implicitly been influenced, by the earlier work. If it can be proved that the later composer had heard the earlier work, seen the score, or had some acquaintance with the composer, it may be possible to suggest that an influence has occurred. However, this does not prove that influence is at work: several more conditions need to be tested. Writing about influence in art and literature, Göran Hermerén describes the 'Requirement of Contact' (whereby the later composer is 'aware' of the earlier work) as the first condition to be

validated in testing an influence statement.⁵ Hermerén then applies two further conditions: (i) the ‘Requirement of Similarity’: ‘If X influenced Y with respect to ‘a’, then X and Y are (noticeably) similar with respect to ‘a’.’⁶ (ii) the ‘Requirement of Change’:⁷ Platoff, drawing on Hermerén, says ‘If X influenced Y with respect to *a*, then Y must be different (with respect to *a*) than it would have been, had there been no influence.’⁸ It will be useful to work through an example to see how these conditions can be used to validate or refute an influence statement. The example will also show that the third condition is, perhaps, the most difficult to assess.

As a piano student many years ago I came across a sonata by Clementi and found myself asking ‘where have I heard that before?’ The answer was, the Overture to Mozart’s *Die Zauberflöte*. Exx. 2.1 and 2.2 reproduce the openings of *Die Zauberflöte* and Clementi’s Sonata in B-flat Op.47 No.1.

Ex. 2.1 Mozart: *Die Zauberflöte*, Overture



⁵ Göran Hermerén, *Influence in Art and Literature* (Princeton and London: Princeton, 1975), p. 164.

⁶ Hermerén, p. 177. Hermerén cautions against the determination of an influence in the context of style; this will be discussed in Section 2.2.3.

⁷ Hermerén, p. 239.

⁸ Platoff, p. 50; see also Hermerén, p. 246.

Ex. 2.2 Clementi: Sonata in B-flat Op.47 No.1, mvt. 1



The first two bars of the Overture to *Die Zauberflöte* are virtually identical to the opening bars of Clementi's Sonata in B-flat (the major difference is that Mozart's piece is a fourth higher). With the exception of the *forte* dynamic on the final beat of each of the first four bars in Mozart's Overture, the pieces are also very similar in terms of articulation. Hermerén's 'Requirement of Similarity', discussed above, is therefore fulfilled.⁹ Since Clementi's sonata was composed before Mozart's opera, the influence being tested is that of Clementi on Mozart. Despite the obvious similarities between the themes, unless it can be proved that Mozart had 'contact' (Hermerén's first requirement) with the Clementi sonata, any assertion of influence is still speculative. In this instance there is proof: a footnote to the first page of the Peters' Edition of the Clementi Sonata states, 'This Sonata (with a Toccata) was played by Clementi in front of Emperor Joseph II in 1781; Mozart was also present'.¹⁰ At this stage, it may seem highly probable that I will conclude that Mozart was influenced by Clementi, but this is where the third condition comes in. If we assert that Mozart was influenced by Clementi we would be saying that Mozart's treatment of the main fugal theme in the Overture to *Die Zauberflöte* is different to what he might have composed had he not encountered—or been influenced by—the Clementi Sonata. Platoff asserts

⁹ It would be wrong to infer that 'similar' means 'identical' because, paradoxically, the very notion of similarity implies some change. In the Mozart/Clementi example there is a fine line between describing the opening two bars as being identical or similar. They are identical insofar as the main theme (albeit transposed) has the same pitch and, crucially, articulation. They are only similar—which means different—because of each composer's treatment of the material: Clementi opts for an accompanying legato bass line whereas Mozart states the theme unaccompanied (as would be expected in a fugal context) and applies dynamics and articulation that give the music greater rhythmic drive.

¹⁰ 'Diese Sonate (nebst einer Toccata) spielte Clementi i. J. 1781 dem Kaiser Joseph II. in Mozarts Gegenwart vor.' Peters Edition No.7189.

that if the condition of ‘Change’ is unfulfilled a hypothetical influence can be refuted.¹¹ How can this be assessed? Platoff suggests the following:

Clearly, the simplest way to assert that Mozart (or any composer) did something different from what he *would have done* is to argue that he did something different from what *he has done* in the past.¹²

So the question is, did Mozart do something different in this overture to what he had done before? The answer is, surely, ‘no’. As a result, rather than describing this as an ‘influence’, it is better classified as a ‘borrowing’.

Meyer argues that borrowing and influence ‘lie at opposite ends of a continuum’ and that the difference between them ‘lies in the relative importance of interpretation.’¹³ This is an opportune moment to mention neoclassicism, which sees composers borrowing and re-interpreting musical material from earlier times. Meyer suggests that Stravinsky’s *Pulcinella* both borrows and interprets music by Pergolesi. However, he thinks that this is not an influence: ‘Stravinsky uses Pergolesi’s tunes as a way of exhibiting his own stylistic strategies, but this does not really change those strategies in any fundamental way. Stravinsky might, one feels, have used someone else’s music just as well.’¹⁴ Martha Hyde is a little more critical of Stravinsky’s writing style in *Pulcinella*. She notes that much of the borrowed material remains unchanged and that ‘Stravinsky’s additions resemble an elegant gloss more than an original composition [...] it more closely resembles an artful arrangement than an authentic neoclassical piece.’¹⁵ The Mozart/Clementi example above should be classed as a borrowing and not an influence because Mozart interprets the theme in his own stylistic way: in other words it exhibits Mozart’s ‘stylistic strategies’, not Clementi’s. How then should we interpret the relationship between Boulez’s *Structures Ia* and Messiaen’s *Mode de valeurs*, mentioned in Chapter 1? Clearly Boulez ‘borrows’ Messiaen’s first division and he re-interprets it; but Boulez’s style is a departure from what he had written previously. All the requirements put forward by Hermerén are fulfilled, so this is an influence (and a borrowing).

¹¹ Platoff, p. 52. At the start of the article Platoff says that an influence statement begins as a hypothesis not a fact.

¹² Platoff, p. 51. Platoff is not discussing *Die Zauberflöte*. This is my example.

¹³ Meyer, *Style and Music*, p. 145.

¹⁴ Ibid.

¹⁵ Martha M. Hyde, ‘Stravinsky’s neoclassicism’, in *The Cambridge Companion to Stravinsky*, pp. 98–136 (p. 110).

The Mozart/Clementi example highlights the difficulties in conclusively proving influence statements and it also serves as a good example of the perils of solely relying on the requirement of ‘Similarity’ to posit such hypotheses. The next section will further explore the problem of ‘content’ in discussing influence.

2.2.1 *The Problem of Content*

William McNaught, writing in the *Musical Times* in 1949, criticises those scholars and musicologists who automatically assume some form of influence has taken place if there is a striking melodic resemblance between two works; this fits in very conveniently with the Mozart/Clementi example cited above. He says of such scholars that ‘they cannot spot a thematic resemblance without putting it down to a cause. In some way or other the later tune has to be beholden for its existence to the earlier one.’¹⁶ McNaught’s use of the word ‘cause’ is perhaps a little strong. Meyer makes a strong distinction between influence and cause: the former is voluntary; the latter implies no choice and is very rare.¹⁷ Further on, McNaught lists the extensive vocabulary of, as he has called such people, the ‘School’:

[...] it comprises influence, borrowing, taking, using, quoting, deriving, modelling, imitating, plagiarizing, adopting, alluding, echoing, taking a hint, and (mystic phrase) unconscious memory.¹⁸

McNaught conjectures that the School’s motto must be ‘it couldn’t have been a mere coincidence’, to which his reply is ‘why on earth couldn’t it?’¹⁹ Hermerén also believes in starting with the ‘assumption of non-coincidence’.²⁰ Assuming some resemblance exists between two pieces, McNaught argues that if the later composer was unaware of the earlier work (with respect to the resemblance) then there is no case of influence or borrowing. But even if the second composer were aware of the earlier piece, McNaught believes that ‘the tune (therefore) goes down in *spite* of the resemblance, and not *because* of it.’²¹ The first part of the argument is logical: if there is no awareness or ‘contact’ there can be no direct

¹⁶ William McNaught, ‘On Influence and Borrowing’, *The Musical Times*, 90 (Feb 1949), 41–45 (p. 41).

¹⁷ Meyer, *Style and Music*, p. 155. Hermerén discusses causality in great detail and I will return to this in Section 2.2.4.

¹⁸ McNaught, p. 41.

¹⁹ Ibid.

²⁰ Hermerén, p. 212.

²¹ McNaught, p. 42. (Emphases in McNaught.)

influence; but the implication of the second half of the argument is slightly more loaded and open to interpretation. On a superficial or simplistic level, McNaught simply states that if a composer really wanted to use some melodic or harmonic formula he would unlikely be dissuaded from doing so just because it bears a resemblance to something else. It is also reasonable to assume that the later composer will do something quite different with the material, as seen in the Mozart example. Indeed, McNaught cites various examples he has collected from correspondents who insist that, because of a thematic resemblance between two pieces of music, the later work must have been influenced by its precursor. McNaught chastises these people for examining the melodic material alone and not taking into consideration the overall aesthetic and musical affect. One of McNaught's collected examples involves the second subject from Dvořák's seventh symphony. An unnamed source concluded that this must have been influenced by the cello theme at the start of the slow movement of Brahms's second piano concerto because the first nine notes are identical.²² In essence, this is correct, but the treatment of the two melodies could not be more diverse. It would appear that the more similar two themes are the harder it is to prove that no influence or borrowing has taken place. However, is it necessary to begin with the premise 'guilty until proven innocent'?

It could be argued that what McNaught really objects to is the pejorative tone of some commentators and the implication that influence/borrowing in a work is a sign of weakness. For example, in the Dvořák/Brahms instance McNaught cites another unnamed correspondent who claims that 'Dvořák has lapsed into a direct reminiscence' of Brahms.²³ McNaught takes issue with the word 'lapsed'; in the forty or so examples McNaught collected he does admit that in the various pairs of pieces, i.e. a piece and its alleged precursor, it is worthwhile pointing out the resemblance but, 'in a surprising number of cases they are no more than fragments of commonplace that scarcely emerge from the *idiomatic language of the time*.' He continues

Throughout the classical-romantic period the ordinary vocabulary of music had in it a thousand and one short phrases and shapes that amounted to little in themselves but

²² For the record: the Brahms extract is for solo cello accompanied by strings, it is marked *Andante*, and it exudes a calm lyricism; in contrast, the Dvořák extract is *Allegro*, it is in compound time, and it is scored for a sizeable section of the orchestra.

²³ McNaught, p. 43.

could act as units in a fabric of significant melody. All day long composers were *borrowing* these bits and pieces, not from each other, but *from the daily language of their art*.²⁴

McNaught concludes the article by succinctly stating his argument: he is not against the existence of influence or borrowing *per se*, but he is against the *insistence* that ‘every likeness means a connection’.²⁵ Hermerén draws a similar conclusion on the concept of style: ‘once one can account for similarities insofar as they are non-specific (i.e. they appear in a lot of other works) then the likelihood of influence decreases’.²⁶ The issue of influence in ‘style’ will be discussed in Section 2.2.3.

The story did not end here for McNaught. The somewhat derogatory, but nonetheless entertaining, tone of his February 1949 *Musical Times* article brought forth a deluge of responses, much of which was concerned with bringing to the McNaught’s attention yet more examples of alleged influence or borrowing. McNaught, feeling an urge to reply and perhaps further clarify the issues, published ‘On Influence and Borrowing – A Sequel’ in the *Musical Times* in May 1950. McNaught takes his readers through a (hypothetical) conversation between himself and a member of the ‘School’. The conversation concludes with the following question: namely, how can one distinguish between two pieces of music being related through coincidence or being related through influence?²⁷ McNaught does not readily supply an answer to this most perplexing of questions. Instead, he speaks in general terms of how coincidences arise, elaborating on the concept of the ‘idiomatic language of the time’:

From Bach to Brahms thousands of tunes were being pieced together with fragments of a diatonic-scale idiom that did not vitally change its elements throughout the baroque, classical and romantic ages. Though the prevailing melodic types differed considerably from period to period, tunes always had to ‘make sense’, and the intrinsic grammar of making sense was much the same throughout the era of melodic music and remained subject to the same limitations.²⁸

So, in McNaught’s opinion, it is inevitable that composers happen upon ‘identical or near-identical phrases’,²⁹ but

²⁴ McNaught, p. 44 (my emphases).

²⁵ Ibid., p. 45.

²⁶ Hermerén, p. 188.

²⁷ William McNaught, ‘On Influence and Borrowing - A Sequel’, *The Musical Times*, 91 (May 1950), 173–77 (p. 174).

²⁸ McNaught, ‘Sequel’, p. 174.

²⁹ Ibid.

2.2.2 *The Anxiety of Influence*

³¹ Harold Bloom, *The Anxiety of Influence: A Theory of Poetry* (New York: Oxford University Press, 1973).

no idea how the likes of us feel to hear the tramp of a giant like that [Beethoven] behind us.’³² Bloom’s book deals primarily with literature (poetry); Hermerén’s, discussed in the previous section, deals with art as well. Several authors (including Meyer, already cited) have attempted to apply some of these theories to music. A case in point is Kevin Korsyn’s informative article ‘Towards a New Poetics of Music Influence’ published in *Music Analysis* in 1991, in which the theories of Bloom and others are remoulded to suit discussion of influence in music compositions.³³ In particular, Korsyn sets out to ‘discuss the theory of intertextuality in music and propose a model for mapping influence.’³⁴ Ironically, a response to Korsyn’s article several years later accuses him of ‘mis-reading’ Bloom, the irony of which will soon become apparent.³⁵ The majority of Korsyn’s article (like McNaught’s) deals with tonal music but the issues that influence statements raise are just as relevant when twentieth-century music is examined. As demonstrated by Korsyn, some of Bloom’s approaches to influence in literature and poetry can be applied to music. Bloom’s first two conditions—‘Clinamen’ and ‘Tessera’—can be effectively taken together since the second is the logical outcome of the first. The term ‘Clinamen’ comes from Lucretius, which Bloom interprets as a ‘Poetic Misreading’;³⁶ ‘Tessera’ comes from the psychoanalyst Jacques Lacan, which Bloom interprets as ‘Completion and Antithesis’.³⁷ His formal definitions are as follows:

‘Clinamen’: ‘[...] the poet swerves away from his precursor, by so reading the precursor’s poem as to execute a ‘clinamen’ in relation to it. This appears as a corrective movement in his own poem, which implies that the precursor poem went accurately up to a certain point, but then should have swerved, precisely in the direction that the new poem moves.

‘Tessera’: A poet antithetically ‘completes’ his precursor by so reading the parent-poem as to retain its terms but to mean them in another sense, as though the precursor had failed to go far enough.³⁸

³² Kevin Korsyn, ‘Towards a New Poetics of Musical Influence’, *Music Analysis*, 10 nos. 1–2 (1991), 3–72. (p. 15), citing Max Kalbeck, *Johannes Brahms*, 4 vols (Tutzing: Schneider, 1976), I, p. 165.

³³ See previous footnote.

³⁴ Korsyn, p. 3.

³⁵ Martin Scherzinger, ‘The “New Poetics” of Musical Influence: A Response to Kevin Korsyn’, *Music Analysis*, 13 nos. 2–3 (1994), 298–309.

³⁶ Bloom, p. 14.

³⁷ Ibid.

³⁸ Ibid.

If we were to apply these conditions to the Mozart/Clementi example, it could be argued that Mozart ‘retains Clementi’s terms’ insofar as he reproduces a straightforward theme, but he drastically changes its ethos (‘swerves away’) through subtle dynamics and extension. In fact, Mozart greatly enhances the theme’s character by creating an exciting fugue: Clementi’s theme is closed, coming to an end on a plagal cadence after just four bars. A Bloomian reading might suggest that Mozart effectively ‘completes’ the Clementi, since the latter ‘failed to go far enough’. For now, one more of Bloom’s conditions will suffice—the idea of ‘Kenosis’, which Bloom interprets as ‘Repetition and Discontinuity’. ‘[...] the central problem for the latecomer necessarily is *repetition*, for repetition dialectically raised to re-creation is the ephebe’s road of excess, leading away from the horror of finding himself to be only a copy or a replica.’³⁹ As mentioned earlier, active repetition (learning from one’s precursors) is important in order to master the art of composition but ‘What the precursors did has thrown the ephebe into the outward and downward motion of repetition, a repetition that the ephebe soon understands must be both undone and dialectically affirmed, and these simultaneously.’⁴⁰ In other words, the later artist must paradoxically absorb and negate what has come before in order to be original. After World War II there was certainly an appetite for absorbing the past (for example, composers wanted to know about serialism), but there developed an even more nihilistic aesthetic to negate the past. A specific example of this will be seen in the section on Boulez in Chapter 3.

Returning to the problem of relying on ‘Similarity’ as a starting point to hypothesise an influence, Platoff says that

if that trait has become a convention then it is pointless commenting on a specific or *exclusive* influence [...] (therefore) a similarity between two works may be meaningless in a discussion of influence if the feature exists in many other works, or forms part of the common style of the period.⁴¹

The problem with the requirement of ‘Similarity’ is that, once idiomatic writing is excluded, all that may remain common to the two works are a few melodic, rhythmic, or harmonic ideas. Even if it can be proved that the condition of

³⁹ Ibid., p. 80.

⁴⁰ Ibid., p. 83.

⁴¹ Platoff, p. 39.

‘Awareness’ is fulfilled it could still be claimed that any similarity is a mere coincidence. The problems inherent in such a circular argument can be readily seen. By ignoring the syntax or language of a particular style, an alleged influence needs to be examined for its exclusivity. Fundamental to any form of influence is the condition of ‘Change’ (discussed in Section 2.2), which is stronger than Bloom’s ‘swerve’. Because this is so important it is worth reiterating the point: this ‘change’ is not simply that the later work is different to its precursor (that it ‘swerved’ away from it) but that the later work is different to what its composer would have done had he or she not encountered the earlier work. In my opinion this permits the discussion of influence in matters of style and language, which (as will be seen in the next section) is not something that Platoff would support.

Interestingly, it is much easier for scholars of twentieth-century music to ascertain what musical works or composers a particular composer was familiar with than for scholars writing about Bach or Handel (for example). In his writings and interviews Messiaen frequently mentions composers and pieces that were important to him. However, I will argue that the composition of *Mode de valeurs* (and the subsequent experimental works) owes as much, if not more, to non-musical influences. These will be discussed in the second half of this chapter (Section 2.3). For now, it is sufficient to note that there is a change in Messiaen’s language in 1949; in other words, he did something different to what he had done in the past.

2.2.3 *The Problem of Style*

The theories outlined above, although applied to tonal music, are just as pertinent when discussing influence in non-tonal music. However, the issue of ‘style’ or ‘language’ in twentieth-century music is a little more complex. In addition, issues of style change and the role that influence plays in this are not really considered in the literature already cited. There is a difference between the ‘influence of style’ and ‘influences that affect style change’. The former is dealt with in some literature: for example, Joseph Straus notes that Bloom is not concerned with the ‘anxiety of style’ but Straus suggests that if a composer is influenced by an earlier ‘style’ this can be discussed using Bloom’s (and other)

models of influence.⁴² It is therefore important to show that theories of influence can be applied just as cogently to matters of style change as they can to content.

Take, for example, Schoenberg's position as a composer and teacher. His pupils, Webern and Berg, joined his composition class in the autumn of 1904 and studied with him for about five years. Misha Donat says that Schoenberg's effect on his pupils 'cannot be overestimated' but cautions that we should remember that by the time they had finished their studies with him, Schoenberg had only just dissolved tonality.⁴³ It would be over ten years before Schoenberg made his first attempts at serialism. On the surface it may appear ludicrous to even ask whether Berg and Webern were influenced by Schoenberg. All the main conditions for asserting that an influence has taken place are present: 'awareness/contact'; 'similarity'—twelve-tone writing; and 'change'—seen in a 'swerve' away from Schoenberg with fundamentally different approaches to composition (for example, Webern's use of symmetrical rows) and the fact that Berg and Webern did something different to what they had composed before. But is the second condition of 'similarity' truly fulfilled? The answer appears to be 'yes', but in the discussion thus far, Hermerén and others have insisted that idiomatic language should be discounted when assessing influences. In addition, by the time Berg and Webern had finished their studies with Schoenberg they were composers in their own right and, as implied above, they never studied serialism with Schoenberg. However, it is known that Berg and Webern maintained contact with Schoenberg after their studies and that Schoenberg discussed serialism privately with his associates in 1923. In 'Schoenberg's Tone Rows', reproduced in *Style and Idea*, Schoenberg recalls how he remained silent for about two years on his new approach to composition. Schoenberg initially thought that if he revealed the technique people would be 'confused'. However, he felt compelled to gather his close friends and pupils to prove to them that he had been working on it for ten years: 'I did it because I was afraid to be taken as an imitator of Hauer [...] I did not call it a "system" but a "method", and

⁴² Straus, *Remaking the Past*, pp. 18–19. The focus of Straus' book is on how twentieth-century composers absorb and re-interpret the past; as such, it is not particularly relevant to my discussion of style change.

⁴³ Misha Donat, 'Second Viennese School?', *Tempo*, 99 (1972), 8–13 (p. 8).

considered it as a tool of composition but not a theory.’⁴⁴ There are fine lines between these terms; we may accept Schoenberg’s ‘method’ over ‘system’ and ‘tool of composition’ over ‘theory’, but by the late 1940s such labels were of little import. I would agree that serialism is a method of composition but the resulting language (despite appearing to be to be the logical successor to late romantic harmony and then atonality), marks a radical aesthetic shift from all that preceded it. Therefore, despite Hermerén and Platoff’s insistence that idiomatic language be excluded when assessing influence, I would contend that in the case of serialism it is permissible to include language and style in assessing Schoenberg’s influence on Berg and Webern. Therefore, the condition of ‘similarity’ is fulfilled.

With Messiaen and the subsequent development of total serialism we are dealing with fundamental changes to language/musical syntax. Meyer’s ‘axiom of inertia’, whereby constancy is the norm and change must be explained,⁴⁵ surely permits the inclusion of influence in the assessment of style change. Platoff makes the valid point that, since concepts of style change are so large, a particular influence may be trivial in the overall picture.⁴⁶ Indeed, we must be wary of suggesting that every change is attributable to some form of influence. But surely a combination of factors and influences can contribute to style change? How else would it happen? Platoff is totally against this but does not offer any thoughts on how changes of style can be accounted for:

[...] influence statements may serve as (partial) explanations of choices made by individual composers. But since the hypotheses advanced to explain changes in style operate at levels transcending the particular decisions of individuals, matters of influence are fundamentally irrelevant to such accounts of stylistic change.⁴⁷

As Platoff’s article focussed on tonal music (Mozart’s *Idomeneo*), he can perhaps be excused for making such a sweeping statement because the issue of radical style change is not particularly pertinent. I believe that we can use theories of influence to determine and assess changes in musical language in the twentieth century. Therefore, in examining radical changes in style, it is apposite to take

⁴⁴ Arnold Schoenberg, *Style and Idea*, ed. by Leonard Stein, trans. by Leo Black (London: Faber and Faber, 1975), p. 213.

⁴⁵ Platoff, p. 61, citing Leonard B. Meyer, ‘Innovation, Choice and the History of Music’, *Critical Inquiry*, 9 (1983), 520–545 (p. 530).

⁴⁶ Platoff, p. 62.

⁴⁷ *Ibid.*, p. 65.

into account a wide range of issues; even something that seems trivial (or irrelevant, according to Platoff) may turn out to be a building block towards a new style. In the context of Messiaen's works from 1949 to 1952 there are (on initial inspection) fundamental differences to what he had written before. Central to forming an understanding of these works and their place in Messiaen's compositional output (as well as their position in twentieth-century music), is the question of whether these pieces mark a radical departure from Messiaen's 'technique'—implying external influences—or are part of the natural evolution of Messiaen's compositional language—implying that the pieces are no different to what one would expect Messiaen to have composed. This thesis will argue that it is in fact a combination of both; in other words there is an element of progression in Messiaen's music, but this progression is different to what it would have been had various influences not exerted themselves on him.

Meyer argues that in more complex cultures change happens more quickly than in less developed cultures. Given the political, cultural and intellectual climate that emerged after the Second World War, even a small change in one of these will have ramifications for the others:

[For] it seems plausible to suppose that the larger the number of parameters coexisting and interacting within a culture, the greater probability that any one of them—for instance, musical style—will be noncongruent with some other. And the disequilibrium resulting from such noncongruence will tend to foster change and encourage innovation.⁴⁸

Whilst I acknowledge Platoff's concern about the role influence on style change, Meyer's comments above validate the rationale for examining a range of events in the 1940s that directly (or indirectly) impacted on Messiaen. It is through an assessment of such events, personalities, and the music, that we gain a better understanding of Messiaen's musical language in the works from 1949 to 1952.

2.2.4 Causation

There is one other factor that needs to be considered in any discussion of influence; the issue of whether an influence 'causes' a composer to do something is a little more difficult to assess. Platoff seems to agree with Meyer's view that

⁴⁸ Meyer, *Style and Music*, p. 118.

composers choose or accept an influence, rather than the influence causing them to do something; this is at odds with Hermerén's emphatic statement below:

Influence statements provide us with explanations, they indicate *why* works of art have certain definite properties, and they provide us with causal explanations, since they indicate the cause or at least a cause of the fact that the works or art in question have these properties.⁴⁹

The dichotomy between causation and choice has one important overlap. Both schools of thought require ascertaining (according to Hermerén) 'why the person who created *Y* was influenced by *X* on this occasion, or why he was influenced by *X* rather than by *Z*.'⁵⁰ Drawing on this, Platoff concludes that 'An influence statement [...] can never be an explanation without also being a statement that itself requires explanation.'⁵¹ *Mode de valeurs* has proved itself to be an influential piece in the development of total serialism. However, the task here is not to assess the influence of *Mode de valeurs*; rather, the focus is on how (or why) Messiaen came to write this piece and the others composed between 1949 and 1952. To that end, the next section will provide an overview of Messiaen's life in the 1940s with the aim of highlighting events that help shed light on why his music changed. This should be read in the context of the cultural, political and musical climate discussed in Chapter 1, particularly as Messiaen was part of this heady melee. I will return again to influence in Chapter 3, where the focus will be on three people (Boulez, Leibowitz and Cage) who, I argue, are pivotal to understanding the change in (or evolution of) Messiaen's language.

2.3 Messiaen in the 1940s: A Historical Overview

The purpose of this section is to highlight important historical events in the 1940s that can be argued to have had an influence on Messiaen. It is not intended to be a comprehensive account of the period since this is well documented, particularly in two recent publications.⁵² The emphasis here is to focus on events that shaped Messiaen's musical journey up until c. 1949 and, although there will be references to the influence of several people, the roles of Boulez, Leibowitz

⁴⁹ Platoff, p.58, citing Hermerén, pp. 122–23.

⁵⁰ Hermerén, pp. 122–23.

⁵¹ Ibid., p. 64.

⁵² See Hill and Simeone, *Messiaen*, and Dingle, *The Life of Messiaen*. See also Simeone 'Messiaen in 1942: a working musician in occupied Paris', in *Messiaen Studies*, ed. by Scholl, pp. 1–33, for an interesting account of this period.

and Cage will not be discussed in detail until Chapter 3. Following on from the discussion above on influence, it is important to reiterate that the notion of cause and effect has to be approached very carefully. Very rarely does an event or person cause someone to do something: it is still a matter of choice. However, the accumulation of a series of events—for example, Messiaen’s appointment to the teaching staff of the Paris Conservatoire in 1941—does at least permit researchers to comment on the resulting effect: had such an event (or events) not happened the composer may have done something completely different.

2.3.1 1940–1945

The most infamous event of 1940 was Messiaen’s capture and imprisonment in Silesia. Meeting the Egyptologist Guy-Bernard Delapierre whilst en route to the Prisoner of War camp would prove to be fruitful several years later. It is also well documented that Messiaen had in his possession at this time Berg’s *Lyric Suite* and Stravinsky’s *Les Noces*.⁵³ The composition of the *Quatuor pour la fin du Temps* whilst in captivity (and its alleged premiere in front of an almost biblical—loaves and fishes—5000 people) radically improved Messiaen’s status and fame.⁵⁴ The *Quatuor* is a benchmark of Messiaen’s compositional style in the early 1940s and the piece would provide many of the musical examples in his *Technique de mon langage musical*, which was to follow a few years later. Some of the features of the first movement (‘Liturgie de cristal’) will be highlighted in Chapter 4 as exemplars of Messiaen’s compositional language.

In May 1941, several months after he was repatriated to France, Messiaen was appointed as a harmony professor at the Paris Conservatoire, the institution where he had received his musical education. According to Yvonne Loriod, a

⁵³ The sonorities of *Les Noces* would prove to be influential in shaping the timbres in Messiaen’s *Trois petites Litugies* (see Section 3.4); Messiaen would go on to discuss the *Lyric Suite* in his analysis class (see Section 3.3 for details of Karel Goeyvaerts’s recollections of this; for example, Goeyvaerts points out that, despite highlighting Berg’s use of a twelve-tone ‘wedge’ row, Messiaen was not particularly interested in deciphering the rows (and their deployment) in the piece).

⁵⁴ Messiaen estimated the audience to be in the thousands. See Antoine Goléa, *Rencontres avec Olivier Messiaen* (Paris-Genève: Slatkine, 1984), p. 63. See also Malcolm Hayes’s account of the work’s genesis and premier: ‘Instrumental, Orchestral and Choral Works to 1948’, in *The Messiaen Companion*, ed. by Peter Hill (London and Boston: Faber and Faber, 1995), pp. 157–200 (p. 180). Hayes concludes his discussion of the premiere with Messiaen’s words to Goléa: ‘Never have I been heard with as much attention and understanding.’ (Goléa p. 63). Rebecca Rischin has clarified that probably no more than 400 attended the first performance. See Rebecca Rischin, *For the End of Time: The Story of the Messiaen Quartet* (New York: Cornell University Press, 2003) p. 62.

student at the Conservatoire at this time, Messiaen's appointment could be partly attributed to the effects of war. André Bloch, a Professor of Harmony at the Conservatoire and a Jew, retired earlier than expected, more than likely in an attempt to pre-empt the inevitable dismissal that would ensue from the enforcement of the Nazi's anti-Semitic policies. Messiaen formally assumed Bloch's position at the start of the next academic year, the autumn of 1941.⁵⁵ It should be stressed that Nazi policy did not cause Messiaen to get a job in the Conservatoire but it certainly can be argued that it moved him further up the appointment chain. Messiaen's early years as a teacher in the Conservatoire are vital to understanding the evolution of his language and it is here that reciprocal influences start to emerge.⁵⁶ Messiaen viewed teaching as an opportunity to advance his own knowledge through analysis. However, the Conservatoire was a conservative place—rarely anything more modern than Debussy was discussed—and Messiaen faced many constraints on what he could and could not do; Loriod specifically recalls that contemporary music was banned.⁵⁷ Such policies were not completely a result of Nazi occupation—they had long been imposed by Conservatoire authorities—but Nazi policy had a profound effect on the cultural climate of much of Europe in the 1930s and 1940s (discussed in Chapter 1).

When Messiaen became reacquainted with Delapierre some years later in Paris, an important avenue opened itself for teacher and pupil alike. Delapierre offered Messiaen the use of a room in his house where he could teach a private class in analysis and composition. Among those who attended were Yvonne Loriod, Serge Nigg, Maurice La Roux and Pierre Boulez.⁵⁸ As well as analysing Classical music, Messiaen analysed much of his own music and major works from the twentieth century, including Stravinsky's *Le Sacre du Printemps*, Berg's *Lyric Suite* and Schoenberg's *Pierrot Lunaire*. The choice of these latter works is noteworthy: by tackling such pieces of music, which most Conservatoire students would never have had the opportunity to discover at that

⁵⁵ Jean Boivin, *La Classe de Messiaen* (Paris: Christian Bourgois, 1995), p. 31.

⁵⁶ A practical example of reciprocal influence can be seen in the relationship between Boulez and Messiaen, which will be discussed in Section 3.2.

⁵⁷ Peter Hill, 'An Interview with Yvonne Loriod, in *The Messiaen Companion*, pp. 283–303 (p. 290).

⁵⁸ The class was established in 1943 but Boulez only appeared a year later and would only remain there for just under a year. See Goléa, *Messiaen*, p. 60.

time, Messiaen immediately became a magnet for the most curious and gifted students. It is therefore understandable how Messiaen stood out at the Conservatoire as, to use Boulez's description, a 'clear beacon':

Names that were all but forbidden, and works of which we knew nothing, were held up for our admiration and were to arouse our intellectual curiosity—names that have since made quite a stir in the world.⁵⁹

The creation of this private class was a pivotal moment for Messiaen. First, it encouraged his students to put forward the case for Messiaen to be given a composition class at the Conservatoire.⁶⁰ Some students approached Claude Delvincourt, the Director at the time, who did look in on the private class. However, opposition from some of Messiaen's colleagues (to be discussed below) meant this was impossible at this time. Delvincourt did, however, establish a class (initially called Analysis and Aesthetics), which was to be run on the same grounds as Messiaen's private class and would replace his formal analysis class.⁶¹ Second, while teaching the private class, Messiaen was also engaged in writing his *Technique de mon langage musical*. He frequently discussed some of the compositional techniques in his own works but this was not done to encourage others to follow him. His influence is more readily seen in bringing, for example, Stravinsky's rhythmic innovations to the fore.⁶² Third, the presence of a phenomenal pianist (Yvonne Loriod) was to be a major inspiration for all of Messiaen's piano writing from this point forward and, as mentioned in Chapter 1, she and he developed a very close relationship that would see them marry some twenty years later. Finally, because Delvincourt effectively allowed Messiaen to transplant his private class to the Conservatoire, Messiaen became something of an 'unofficial' composition teacher at the Conservatoire. Although the newly named class at the Conservatoire afforded Messiaen great status at that august institution, Jean Boivin points out that many of his colleagues regarded him as being slightly eccentric. Françoise Gervaise, in conversation with Boivin, recalls that Tony Aubin (a composition professor) forbade his students to set foot

⁵⁹ Pierre Boulez, 'A Class and its Fantasies', in *Orientations*, ed. by Jean-Jaques Nattieux, trans. by Martin Cooper (London : Faber and Faber, 1991), p. 404, a reprint of *Une classe et ses chimères* – a tribute to Messiaen on his fiftieth birthday from the programme for the Domaine musical concert of 15 April 1959.

⁶⁰ Goléa, p. 239.

⁶¹ Messiaen would not formally be made Professor of Composition until 1966.

⁶² Messiaen's analysis of *Le Sacre* is reproduced in *Traité*, II.

in Messiaen's analysis class, which (apart from the belligerent nature of the decree) was in direct violation of Delvincourt's instruction that made attendance in Messiaen's analysis class obligatory for all composition students.⁶³ It is also reported that several professors, specifically Jean and Noël Gallon, were openly hostile to Messiaen and that this adversely affected Messiaen's students.⁶⁴ But not everyone was sceptical of Messiaen: Milhaud, another composition professor, never prevented his students from going to Messiaen's class, and Goléa notes that the two men complemented each other's work.⁶⁵

Many of those who studied with Messiaen around this time have commented that the analysis class was partially a class in composition. Indeed, all Messiaen's analysis classes and lectures were effectively classes in composition. Messiaen confirms this in conversation with Goléa:

My harmony class was at times a class in composition; my rhythmic analysis courses at Budapest, Saarbrücken, Darmstadt and Tanglewood were, in reality, classes in composition, and my formal analysis class (in the Conservatoire) was addressed almost exclusively at composers.⁶⁶

With the exception of the few interpersonal relationship problems at the Conservatoire, the vast majority of what has so far been recounted was positive for Messiaen. Any personal issues with colleagues at the Conservatoire were surely outweighed by the stimulating new intellectual environment in which he found himself. The emerging new generation of composers flocked to Messiaen but, as will be seen shortly, loyalty was in short supply in 1940's Paris and they were as quick to leave as they were to arrive.

2.3.2 1945–1950

Although this section deals with the final few years of the 1940s, it will also jump further forward to highlight that many of the issues raised did not go away.⁶⁷ Critical reception of two major works by Messiaen in the 1940s gave rise

⁶³ Boivin, p. 75.

⁶⁴ Ibid.

⁶⁵ Goléa, p. 241.

⁶⁶ 'Ma classe d'harmonie était par moments une classe de composition, mes cours d'analyse rythmique à Budapest, à Saarbrücken, à Darmstadt et à Tanglewood étaient en réalité des classes de composition, et mon actuelle classe d'analyses s'adresse presque exclusivement à des compositeurs', Goléa, p. 241.

⁶⁷ David Drew's final article in his Messiaen 'trilogy' (1955) does not shy away from openly criticising the music. For example, he regards *L'Echange* from the *Vingt regards* as 'naïve' and says that the piece is 'not so much worthless as non-existent. [...] *L'Echange* is not so much a

to what has become known as ‘Le cas Messiaen’. The premieres of the *Vingt regards sur l’Enfant-Jésus* and the *Trois petites Liturgies de la Présence Divine* took place a month apart in March and April 1945. Bernard Gavoty, writing as Clarendon in *Le Figaro*, wrote a scathing review of the *Vingt regards*. Hill and Simeone identify two main concerns: first, ‘the relevance and literary quality’ of Messiaen’s excessive commentaries; and second, ‘the characteristic traits of Messiaen’s music’.⁶⁸ With such negative comments swirling around the press, Claude Rostand added further to the debate by publishing an article on Messiaen on the day the *Trois petites Liturgies* was premiered.⁶⁹ As noted in Chapter 1, Messiaen’s next work *Harawi* saw the composer become much more enigmatic by not providing a commentary to the work; perhaps the adverse coverage of the *Vingt regards* affected him? It is very likely that the fundamental criticisms of Messiaen’s musical language were much more hurtful than the concerns people had with the commentaries and subject matter.

We have already seen that the concept or understanding of language is fundamental to the evolution of music in the twentieth century. As ‘Le cas Messiaen’ rumbled on, diverging views on Messiaen’s language emerged. Hill and Simeone recount a review of the *Vingt regards* by Marc Pincherle: ‘[Messiaen] increasingly inhabits a phantasmagorical universe to which we do not have a key [...] every [symbol] is quite enigmatic for us, and he translates these into a highly individual musical language into which we must be initiated by his printed and spoken commentaries.’⁷⁰ Pincherle’s comments effectively implied that Messiaen’s music was weak or flawed; with overtones of the disparaging comments made about programme music in the nineteenth century, he revisits the polemic whereby music that requires literary props for validation or meaning is regarded as inferior. None of this furthered the case for Messiaen to be given a composition class at the Conservatoire. Indeed, one of the

composition as a pre-compositional plan [...]’ See Drew, ‘Messiaen: A Provisional Study (III)’, *The Score*, 14 (1955), 41–61 (p. 47).

⁶⁸ Hill and Simeone, pp. 144–45.

⁶⁹ See Dingle, *Life of Messiaen*, p. 88 and Hill and Simeone pp. 144–47 for more information on this.

⁷⁰ Hill and Simeone, p. 146, review of *Vingts regards* by Marc Pincherle in *Les Nouvelles littéraires* (12 April).

objections raised when Boulez (and others) approached Delvincourt on this subject was the debacle in the press over the *Trois petites Liturgies*.⁷¹

Not all the press was negative, and Hill and Simeone provide a balanced account of reviews of the *Trois petites Liturgies*.⁷² For example, one reviewer complimented Messiaen for ‘proclaim[ing] the supremacy of things spiritual’ in music that is best characterised as being ‘at the extreme opposite to that of academicism.’⁷³ It would be interesting to know what this reviewer, Roland-Manuel, would have made of *Mode de valeurs* and Messiaen’s other more abstract works. Presumably, as Professor of Aesthetics at the Conservatoire, he continued to be aware of Messiaen and his output.

In spite of the preponderance of negative reviews, Messiaen was delighted with the premiere of the *Trois petites Liturgies*. In conversation with Claude Samuel, he refutes the suggestion that the work caused a scandal: ‘No, its success was instantaneous - at least with the public.’⁷⁴ However, Messiaen acknowledges that a few critics and some of his colleagues took issue with the work, many ‘of whom carried on to their heart’s content, heaping abuse upon me for ten years after the premiere’.⁷⁵ When asked what effect all this had on him, Messiaen was less than forthcoming. He simply said that he was astounded by the reaction and (at the time of the conversations with Samuel) could still not understand the criticisms. Hill and Simeone categorically state that ‘Messiaen was hurt by critical assaults of this kind: they sought to undermine not only the theoretical foundations of his music, but even to cast doubt on the genuineness – the ‘sincérité’ – of his music.’⁷⁶ Messiaen defended his choice of religious texts and told Samuel that ‘the people attacking me didn’t know these texts; they didn’t understand anything – but they were all the same roused from their

⁷¹ See Alain Périer, *Messiaen* (Paris, Editions du Seuil: 1979), pp. 80–81 for further details of the review. Boulez, who attended the premiere, recalls that the performance was very well received by the audience but that there was a scandal in the press. See Roger Nichols, ‘Boulez on Messiaen: Pierre Boulez in conversation with Roger Nichols’, *Organists’ Review*, 1986, 167–70 (p. 169).

⁷² See Hill and Simeone, pp. 149–52.

⁷³ Roland-Manuel, *Combat* (3 April 1945), quoted in Hill and Simeone, p. 145.

⁷⁴ Claude Samuel, *Oliver Messiaen Music and Color: Conversations with Claude Samuel*, trans. by E. Thomas Glasow (Portland, Oregon: Amadeus Press, 1986/94), p. 130.

⁷⁵ Samuel, *Music and Color*, p. 130.

⁷⁶ Hill and Simeone, p. 145.

complacency'.⁷⁷ He also highlighted the work's [*Liturgies*] 'daring' musical aesthetics and the combination of timbres.

In October 1945, a month after the death of Bartók, Messiaen wrote a glowing obituary (published in *Images musicales*), which showed his great admiration for the composer. Messiaen singled out Bartók's *Music for Strings, Percussion and Celesta* for its innovative use of the orchestra (especially the piano, celesta and xylophone).⁷⁸ On this issue of timbre, Messiaen had his admirers. In a lecture in Strasbourg in 1960 on the second of his *Improvisations sur Mallarmé*, Boulez recalled Messiaen's novel use of the vibraphone in the *Trois petites Liturgies*, which he heard at the premiere: 'I shall never forget our amazement as his students when we heard this instrument taking its place among those of the traditional orchestra.'⁷⁹ Boulez also acknowledges Désormière's 'moral rectitude' in conducting Messiaen's latest composition in the midst of growing criticisms:

At a time when disputes about Messiaen's music were at their height and no criticism was too low, too facile or too insultingly expressed, he was the only person besides the composer to know what was really at stake [...] he devoted himself completely to performing the *Liturgies* with the greatest possible brilliance and sonorous power. He gave a wonderful example and gave it with a total lack of pretentiousness.⁸⁰

Elsewhere, Boulez acknowledges that Messiaen's *Trois petites Liturgies* (along with works by other composers) was important in opening up the possibility of new instrumental combinations: '[...] there was no lack of models for the new instrumental evolution of our own time'.⁸¹ As discussed in Chapter 1, in the late 1940s Boulez was quickly forming the opinion that orchestration should be an integral part of the composition process, not merely an adjunct. Of course, all these positive comments by Boulez come many years after the events; they have to be tempered with what he said at the time (see, for example, some of Boulez's less flattering views on Messiaen's works ('brothel music' and 'vomit'), which are recounted in Chapter 3).

⁷⁷ Samuel, p. 130.

⁷⁸ Hill and Simeone, p. 162, citing Messiaen, 'Bela Bartók, *Images musicales*, no.2, 19 October 1945, p. 4. For an assessment of Bartók's influence on Messiaen see Madeleine Hsu, 'Bartók: Messiaen's Master of Thought?', *Journal of the American Liszt Society*, 35 (1994), 61–68.

⁷⁹ Pierre Boulez, 'Constructing an Improvisation', in *Orientations*, pp. 155–73 (p. 160).

⁸⁰ Pierre Boulez, 'Roger Désormière: "I Hate Remembering!"', in *Orientations*, pp. 500–12 (p. 505).

⁸¹ Pierre Boulez, 'Speaking, Playing, Singing', in *Orientations*, pp. 330–43 (p. 343).

After the liberation of Paris, Henry Barraud organised a Stravinsky cycle of concerts, which took place in April 1945. Over the course of seven concerts, Stravinsky's orchestral music was 'comprehensively covered'.⁸² At two of the concerts people started whistling and making noise, and there was entrenchment between those who supported *Le Sacre* and those who supported Stravinsky's neoclassical works. Several protesters were known to be students in Messiaen's class and were thus branded as 'messiaeniques'.⁸³ Christopher Dingle suggests that these protests were initiated by René Leibowitz.⁸⁴ Boulez, one of those at the forefront of the protests, provides a more circumspect reflection on what happened. He recalls attending two concerts conducted by Roger Désormière: one, the premiere of (and rehearsals) for the *Trois petites Liturgies* (mentioned above); the other, a performance of works by Stravinsky and Dallapiccola. For the latter, Boulez and his cohorts 'banded together to hiss loudly, while at the same time receiving a work of Dallapiccola's with the greatest enthusiasm, in order to show – one way or the other – which we preferred.'⁸⁵ Boulez claims that they all went to see Désormière afterwards to apologise and insist that the protest was not directed at him, for he was greatly admired.

[...] I believe that he felt sympathetic towards our rowdy behaviour rather than hostile. He scented in it a new spirit and was himself perfectly aware that musical life was not going to go on just as it had before, that 'post-war' was not going to be a just a return to 'pre-war' music any more than it was in cooking, clothes or drinks [...] His reaction showed interest, quite unlike the hostility of most of the Paris musical establishment.⁸⁶

In this chaotic and highly charged atmosphere, with critics riling against Messiaen, and some composers attacking and others defending Stravinsky (Jolivet in the former camp, Poulenc in the latter), Messiaen took up his pen and responded in an article in *Volontés* (16 May 1945). Hill and Simeone reproduce a substantial part of this in *Messiaen*.⁸⁷ Messiaen acknowledges that there have been some neoclassical 'masterpieces' and that

Stravinsky is a huge genius. [...] After Stravinsky, Honegger and Bartók, we are waiting for a composer who is not neoclassical but who is so profoundly and

⁸² Hill and Simeone, p. 152.

⁸³ See Goléa, p. 60.

⁸⁴ 'Aguila intimates that the whistling was actually incited by René Leibowitz.' Jésus Aguila, *Le Domaine Musical* (Paris: Fayard, 1992), p. 178, cited in Dingle, *Life of Messiaen*, p. 93.

⁸⁵ Boulez, 'Roger Désormière', in *Orientations*, p. 505.

⁸⁶ Ibid., pp. 505–06.

⁸⁷ See Hill and Simeone, pp. 152–54.

brilliantly revolutionary that his style will one day be classed *classical*. [...] When will he appear? In 20, 50 70 years? What a burden of influences, hesitations, reappraisals, blind alleys, hopes, experiments and partial successes will rest upon his shoulders!⁸⁸

Messiaen implores his detractors to ‘leave Stravinsky in peace’ and to stop unjustly accusing his students. Regarding the exuberance shown by some people, Messiaen says: ‘be glad of their passionate feelings, signs of a more generous and humane generation’.⁸⁹ Messiaen’s eloquent response to the Stravinsky ‘event’ has a tone of religiosity about it: he comes across as a prophet urging us to pray for the ‘innovator, that liberator who is so impatiently awaited: the composer of Love.’⁹⁰ It would be interesting to know what reaction this article garnered. Messiaen was not quite the ‘national treasure’ yet—it would be many years before that epithet would be appended—and it must be remembered that these were the words of a young man in his late-thirties. It would be interesting to know if the emerging avant-garde or the established press would have regarded such comments as a little precocious and more fittingly belonging to an elder statesman?

There would be further discussion in the press and in journals of ‘Le cas Messiaen’. Bernard Gavoty published another lengthy attack in the journal *Études* (October 1945); Delapierre and Gilbert Leduc published responses defending Messiaen, for which the composer was always grateful.⁹¹ For years to come Messiaen would receive mixed reactions to his works: a performance of the *Quatuor pour la fins du Temps* in Darmstadt received a ruthless reaction from the young musicians present, some of whom took exception to the preponderance of added sixth chords. Goléa recalls that the musicians reproached Messiaen for the contrast between his ‘theoretical claims’ and the ‘banality of his inspiration’.⁹² Despite Gavoty’s negative reviews of Messiaen, the composer agreed to do an interview with him before a performance of the *Trois petites Liturgies* in Paris in February 1961. The interview was published in the *Journal*

⁸⁸ Hill and Simeone, p. 153.

⁸⁹ Ibid.

⁹⁰ Ibid., p. 154. Are there echoes of ‘Zarathustra’ as well?

⁹¹ Hill and Simeone, p. 161. See also pp. 165–68 for a discussion of two further articles published in *Le Figaro littéraire* and other contributions to ‘Le cas Messiaen’ in 1946.

⁹² Goléa, *Messiaen*, p. 68. See also, Everett Helm, ‘Current Chronicle: Germany’, *The Musical Quarterly*, 37 no. 1 (1951), 98–102. Helm described the period 1949–51 in Berlin as a ‘low point for modern music’. Amongst the works performed was Messiaen’s *Quatuor*, the merit of which was described as ‘debatable’ (p. 99).

Musical Français and subsequently translated in *Tempo*.⁹³ As Gavoty's questions are short and factual (and this is a written record), it is difficult to sense the tone or what the relationship between interviewer and interviewee was like. Gavoty's opening question is that of the article's title: 'Who are you, Olivier Messiaen?' Messiaen's brief response is that he is 'A musician—that is my profession. A rhythmologist—that is my speciality. An ornithologist—that is my passion.'⁹⁴ None of Gavoty's questions have critical depth—perhaps because the interview and performance took place at a youth music concert—but his final two questions seem to relate to the works that engendered much debate in the 1940s. Gavoty's penultimate question asks if Messiaen has been influenced by surrealism, to which Messiaen responds 'I am some sort of surrealist in the poems of my works, if not my music', giving a specific example in the *Trois petites Liturgies*. Gavoty's final question, 'For whom to you write?', engendered a response from Messiaen which was subtly directed at Gavoty himself. But, to the very end, Messiaen remains humble and dignified:

Only for myself. I am as indifferent to applause as to boos. But if someone cries in the hall, then I too am moved to tears. Otherwise I experience neither pleasure nor lasting sadness in face of such and such a public reaction. One thing alone is important to me; to rejoin the eternal durations and the resonances of the above and beyond, to apprehend that inaudible which is above actual music . . . Naturally I shall never achieve this.⁹⁵

Before leaving 'Le cas Messiaen' there is at least one other exceptionally unbalanced and negative critique worth a mention. As a sustained broadside, André Hodeir's polemic ranks alongside Leibowitz's critique of Messiaen (to be discussed in Chapter 3). Although written several years after this period (1945–1949), it illustrates just how precarious Messiaen's position as a respected composer would continue to be. In 1961 Hodeir published a book on contemporary music and devoted an entire chapter to Messiaen. Virtually every aspect of Messiaen's music is lambasted. Hodeir highlights problems with stasis, lack of development, form, harmony, rhythm, and the birds, to list but a few. A few quotations will give the reader a flavour of the vindictiveness. Hodeir regards the *Trois petites Liturgies* as Messiaen's 'best pages' but argues that the music 'is a voluptuous, ingrown world of subtle thrills [...]; [the work] is an

⁹³ Bernard Gavoty, 'Who are you, Olivier Messiaen?', *Tempo*, 58 (1961), 33–36.

⁹⁴ Gavoty, p. 33.

⁹⁵ Ibid., p. 36.

effeminate replica of *Les Noces* [...];’ finally, he describes how it ‘lack[s] the assertive power which is the sign of the authentic masterpiece.’⁹⁶ With reference to Messiaen’s more ‘radical’ works (the works of 1949–52), Hodeir says: ‘[Messiaen] did not invent a new concept so much as foreshadow its invention [...] he was far too involved with the past to envisage, in all its devastating vigor, the revolution he was unwittingly helping to prepare.’⁹⁷

Even Hodeir’s half-veiled compliments are laced with venom: ‘For while there is little doubt that Messiaen’s was the only discipline in the world to have retained any vitality at all, the fact remains that his lessons would have been utterly useless had they not been poured into minds capable of transcending them.’⁹⁸ Hodeir concludes the chapter with a postscript saying that, after World War II, Messiaen’s ‘failure was not yet apparent’.⁹⁹ This last comment shows just how skewed and out of touch Hodeir’s views were, and would become.¹⁰⁰

With all these reviews and criticisms, it is possible to get a sense of Messiaen’s isolation from the musical mainstream. But long before ‘Le cas Messiaen’, other people saw in Messiaen a man who was slightly withdrawn from society, despite his busy teaching and performing schedule. Nigel Simeone has uncovered a profile of Messiaen dating from May 1942 and subsequently published in 1949. The interviewer and profiler, Armand Machabey, is full of praise for this young musician but notes that ‘he withdraws into himself, his home, and towards God.’¹⁰¹ Simeone finds this curious, given how busy Messiaen was, but I suspect that Machabey merely sensed that Messiaen was an intensely private person, and a man with a deep faith. It is also likely that Messiaen’s highly personal musical language is indicative of an introspective personality. The early successes in the 1940s seemed to sit well with Messiaen: they suited his personality, as they were local and small; Messiaen seemed less

⁹⁶ Hodeir, André, *Since Debussy: A View of Contemporary Music*, trans. by Noel Burch (London: Secker and Warburg, 1961), pp. 105–23 (p. 121).

⁹⁷ Hodeir, p. 109.

⁹⁸ *Ibid.*, pp. 122–23.

⁹⁹ *Ibid.*, p. 121.

¹⁰⁰ For a more balanced account (written in the mid-1950s) of Messiaen’s music and its position within twentieth-century French music, see David Drew, ‘Modern French Music’, in *European Music in the Twentieth Century*, ed. by Howard Hartog (London: Routledge & Paul Kegan, 1957), pp. 232–95 (see especially pp. 277–91). Drew sees Messiaen as a ‘crucial figure’ and notes that ‘since the pioneering days of Stravinsky and Schönberg, no composer has been subjected to such intense vilification from all quarters.’ (p. 282).

¹⁰¹ Armand Machabey, *Portraits de trente musiciens français* (Paris: Richard Massé), pp. 129–30, cited in Simeone, ‘A working musician’, p. 14.

comfortable with the later successes (in particular, *Mode de valeurs*). Even Messiaen's apparent extrovert acceptance of international acclaim from the 1960s onwards is tinged with introspection and reluctance. Messiaen would much rather spend time with Loriod and his 'birds' than attend a formal dinner in his honour.

Despite the critical press that raged in the 1940s (and in 1961, with Hodeir), after the war, Messiaen started to gain international recognition. The *Quatuor*, *Visions de l'Amen* and the *Trois petites Liturgies* were all performed in Britain. Meanwhile, Leopold Stokowski introduced some of Messiaen's works to the United States. Messiaen had another great supporter of his music in the USA: Serge Koussevitzky. During Messiaen's first trip to the USA he heard Koussevitzky conduct *Les Offrandes oubliées* and *L'Ascension* on 14 August 1949 to an audience of 15000, the biggest Messiaen had ever experienced.¹⁰² Prior to this, in June 1945, Koussevitzky had written to Messiaen to commission an orchestral work.¹⁰³ Several months later Messiaen began work on what would become his most substantial composition to date: the *Turangalila-Symphonie*. It is sometimes easy to overlook just what a commitment this work was. In the context of the first half of the twentieth century, there was a marked decline in the number of large-scale symphonic works lasting over an hour. Rhoderick McNeill notes that the only comparable work in the 1940s is Shostakovich's Symphony No.8.¹⁰⁴ It took Messiaen nearly three years to complete this epic composition (it was finished in December 1948). One of the consequences of this was that Koussevitzky was too ill to conduct the premiere.¹⁰⁵ (The astonishing complexity of some of Messiaen's rhythmic endeavours in *Turangalila* will be highlighted in Chapter 4.)

One interesting feature of the work is that versions of some of the movements were performed in Paris long before the American premiere of the

¹⁰² Dingle, *Life of Messiaen*, pp. 96–97.

¹⁰³ Nigel Simeone, 'Messiaen, Koussevitzky and the USA', *The Musical Times*, 149 no. 1905 (2008), 25–42 (p. 30). Simeone's article gives a comprehensive account of the work's commission, creation and premiere.

¹⁰⁴ Rhoderick McNeill, 'Messiaen's *Turangalila Symphonie* and its place within the Symphonic Genre of the First Half of the Twentieth Century', in *Olivier Messiaen: The Centenary Papers*, ed. by Judith Crispin (Newcastle: Cambridge Scholars Publishing, 2010), pp. 193–204 (p. 195). See, in particular, pp. 194–97 for a useful overview of the main symphonists and their output in the first half of the twentieth century.

¹⁰⁵ Simeone, 'Messiaen, Koussevitzky', p. 35.

work. The three movements were given the title *Trois Tâla*, and would eventually become the third, fourth and fifth movements of the completed work. The *Trois Tâla* should not be confused with similar names of some of the movements of the *Turangalîla-Symphonie* (mvt III: ‘Turangalîla I’; mvt VII: ‘Turangalîla II’; and mvt IX: ‘Turangalîla III’). The *Trois Tâla* was performed on 15 February 1948; it was at the rehearsal on the previous day that Boulez, according to Loriod, made disparaging comments to Messiaen.¹⁰⁶ The work engendered mixed reviews in the press and Boulez published a strong attack in *Polyphonie* (see Section 3.2). Dingle says that ‘this blunt evaluation could only have hurt.’¹⁰⁷

Messiaen saw the performance of the *Trois Tâla* as an attempt to hear his orchestrations but would later claim that the *Trois Tâla* ‘never existed’; Hill and Simeone reproduce a letter from Messiaen to Karl Schweizer (dated 23 March 1980), which backs this up. More subtly, though, Messiaen seems at pains to appease his publisher, Durand, who was probably not pleased that parts of *Turangalîla* had already been performed. Hill and Simeone note that Messiaen’s refusal to sanction performances of parts of the work is at odds with the first edition of the score of *Turangalîla*, published in 1953: in this, Messiaen proposes shorter versions, including movements 3, 4 and 5.¹⁰⁸ Messiaen’s selective amnesia about the *Trois Tâla* surfaced again when he analysed the *Turangalîla-Symphonie* in one of his classes. Karel Goeyvaerts recalls that his first encounter of a performance of a work by Messiaen was the *Trois Tâla*. Later when Messiaen analysed the *Turangalîla-Symphonie*, the students thought that they recognised parts of the *Trois Tâla*, but Messiaen denied that there was any connection.¹⁰⁹ Dingle suggests that the pressure of Messiaen’s students and their new interest in serialism may have caused Messiaen to ‘add the three ‘Turangalîla’ movements into what had, until that point, been a relatively conventional symphony.’ These progressive movements ‘could almost be seen as

¹⁰⁶ Hill and Simeone, p. 173. (Loriod: private communication with Hill and Simeone).

¹⁰⁷ Dingle, *Life of Messiaen*, p. 120.

¹⁰⁸ Hill and Simeone, p. 174. See Hill and Simeone p. 171–72 for details of how the *Trois tâla* made their way into the final version of *Turangalîla*.

¹⁰⁹ Karel Goeyvaerts, ‘Paris-Darmstadt 1947-1956: Excerpt from the autobiographical portrait’, *Revue belge de musicology*, 48 (1994), 35–52 (p. 41).

three studies in the kinds of musical approach that fascinated his most fascinated students.’¹¹⁰

The premiere of the *Turangalîla-Symphonie* took place on Friday 2 December 1949, under the baton of Leonard Bernstein. The programme for the concert included a quotation from a recently published newspaper article, in which Virgil Thompson described Messiaen as the ‘Atomic bomb of contemporary music’.¹¹¹ Despite this powerful epithet, according to Simeone the critics’ reaction to the performances in Boston (2 December) and New York (10 December) was ‘very mixed’. Simeone quotes from a letter Copland sent to a friend in which he said that Koussevitzky ‘was mad for it’ but Bernstein was ‘cold’.¹¹²

The final stages of completing the herculean *Turangalîla-Symphonie* seems to have coincided with Messiaen’s composition of the *Cinq rechants* (discussed in Chapter 1). Hill and Simeone note that the date on the score is December 1948, which seems ambitious, but that it was certainly finished by the following February.¹¹³ This period coincided with a further rapid deterioration in Claire’s (Messiaen’s wife) health. Already suffering from the early stages of dementia, she underwent a hysterectomy in January 1949 and it was after this that Messiaen truly realised the seriousness of the situation. Hill, Simeone and Dingle all conclude that events in Messiaen’s life contributed to the change in style so apparent after *Turangalîla*. Before Claire went to a nursing home where she would spend the rest of her life, Messiaen would care for his wife as best he could for another four years. These were very difficult years. Messiaen continued to fulfil many performance and teaching obligations, and it was inevitable that ‘he and his wife would lead increasingly separate lives.’¹¹⁴

¹¹⁰ Dingle, *Life of Messiaen*, p. 121.

¹¹¹ Dingle, p. 94, citing Virgil Thomson in an article on Messiaen for the *New York Herald Tribune* (23 September 1945).

¹¹² Simeone, ‘Messiaen, Koussevitzky’, pp. 41–2. See also Dingle, pp. 116–18 for details of other reviews. Hill and Simeone also report that the French premiere of *Turangalîla* in Aix-en-Provence in July 1950 caused ‘no shortage of controversy’. See Hill and Simeone, p. 195.

¹¹³ Hill and Simeone, p. 179.

¹¹⁴ *Ibid.*, p. 179.

2.4 Conclusion

From the events recounted here, the 1940s must have been an emotional roller coaster for Messiaen. In particular, the very essence of his compositional language had been challenged by numerous critics and musicians and, with the exception of all the preparations required for the premiere of *Turangalila*, 1949 loomed with no commissions: a blank canvas, if you will. I will now apply some of the influence theories discussed in the first half of this chapter to Messiaen's life and music.

Drawing on some of the theories and terminology posited in the section on influence, it is clear that in the works of 1949 to 1952 Messiaen did something different to what he might have done had he not (i) encountered such negative responses to his music; (ii) been susceptible to the reciprocal influence of his students; and (iii) found himself (somewhat reluctantly) involved in the emerging avant-garde and its quest for a *lingua franca*. Messiaen's music of this period (1949–52) also fulfils Bloom's conditions of 'Clinamen', 'Tessera' and 'Kenosis'. The first two conditions are manifested in Messiaen's response to the serialists' predilection for pitch: he has always made it clear that he thought the serialists did not go far enough. Even though Messiaen claimed that the pitch content of his 'experimental' works was not as important as their rhythmic content, he managed to mix traditional serial techniques with new modes of twelve-tone writing. In other words, he showed an 'awareness' of the past but through 'repetition and discontinuity' he did not become merely a copy or a replica. To invoke Hermerén's principal conditions for determining influence: Messiaen was 'aware' of serialism, the negative criticisms of his music, the inquisitive nature of his students, and the progress or evolution of Western music; this 'awareness' gave rise to exploring techniques that would integrate all the parameters of music: Messiaen's new music is (therefore) 'similar' to what was starting to emerge after Webern's music was assimilated; finally, there is 'change': Messiaen did not merely replicate what Schoenberg or Webern did and (it is worth stating again) Messiaen's music is different to what it would have been had he not encountered these influences.

The next chapter continues the theme of influence and will assess the influence of three crucial figures (Boulez, Leibowitz and Cage) on Messiaen in the late 1940s.

CHAPTER THREE

Three Influential People

3.1 Introduction

Undoubtedly a multitude of persons and events exerted influences on Messiaen. The previous chapter charted the progress of Messiaen's life through the 1940s and provided some insight into events that shaped him as a person and as a composer. In choosing to highlight in some detail three people who it can be argued had an influence on Messiaen does not mean that those who are not discussed in this chapter were not important influences on him: a case in point is Yvonne Loriod, whose exceptional skills at the piano provided much inspiration for Messiaen in writing the large piano works of the 1940s, as well as the *Turangalila-Symphonie*, which contains a formidable piano part. It is not an exaggeration to say that the period 1945 to 1951 was one of the most important periods in the development of Occidental music. As this chapter unfolds, it will be seen that a large number of people were metaphorically thrown together into a large melting pot. The resulting conflicts, friendships, and quests for knowledge had at their roots an urgent reappraisal of the state of contemporary music with a view to finding a universal way forward; although this may not have been Messiaen's intention, he nonetheless would end up playing a seminal role. The three people to be discussed in this chapter are Pierre Boulez, one of Messiaen's pupils in the 1940s; René Leibowitz, conductor, composer, author and promulgator of the serial works of Schoenberg, Berg and Webern; and John Cage, the leading American experimental composer, whom Messiaen met in June 1949.

3.2 Pierre Boulez

Boulez's first encounter with Messiaen as a teacher happened in the spring of 1944 when he visited Messiaen at his house and enquired about becoming one of his students; a chance hearing of Messiaen's *Thème et variations* 'was enough to inspire me with an immediate wish to study with him. I felt the force of his attraction immediately [...] at a single hearing'.¹ The following autumn Boulez

¹ Pierre Boulez, 'The Power of Example', reproduced in *Orientations*, pp. 418–20 (p. 418).

joined Messiaen's advanced harmony class at the Conservatoire. Boulez had already been studying at the Conservatoire since 1943 and even in his early days was starting to show his annoyance and frustration at the rather conservative and antiquated approach to teaching in that institution. However, perhaps more fruitful than Messiaen's advanced harmony class was the private class Messiaen gave at Delapierre's residence (as recounted in Chapter 2), where Boulez and many others were introduced to a wide range of contemporary music, including works by Messiaen. At first, Boulez was impressed by Messiaen, both as a teacher and as a composer, but he gradually became more sceptical of Messiaen's music: he once described the *Trois petites Liturgies de la Présence Divine* as 'brothel music' and said that the *Turangalîla-Symphonie* made him 'vomit', mostly because of the presence of the Ondes Martenot.^{2 3} Paul Griffiths notes that in 1945 Boulez wrote a piano piece entitled *Trois Psalmodies* (quickly withdrawn by the composer), which may actually bear some relation to Messiaen's *Trois petites Liturgies* but also Schoenberg's *Three Pieces* Op.11.⁴

It was only when Boulez moved on to the fugue class, after excelling in Messiaen's harmony class (and with the benefit of hindsight), that he truly realised the superior quality of Messiaen's teaching. He recalls that his new teacher, Simone Plé-Coussade, was 'terrible' and that 'after coming from the freedom of Messiaen, I could not stand it. She was unimaginative and the class was dead.'⁵ This provided a strong impetus for Boulez to ask the Conservatoire director, Claude Delvincourt, to let Messiaen teach a class in composition; quite astonishingly, it was not until 1966 (some twenty years later) that Messiaen was officially given such a class. Boulez saw in Messiaen something that was clearly

² Dominique Jameux, *Pierre Boulez*, trans. by Susan Bradshaw (London: Faber and Faber, 1984/91), p. 33. This apparent aversion to the Ondes Martenot might seem a little peculiar when it is noted that Boulez wrote a quartet for Ondes Martenot, which in turn became the basis of a sonata for two pianos. These works, like so many of Boulez's earliest compositions, were withdrawn by the composer (see Jameux, p. 20).

³ This negative comment on the *Trois petites Liturgies* is in stark opposition to Boulez's admiration of Messiaen's innovations in timbre/orchestration and his defence of Messiaen against the barrage of criticisms (discussed in Chapter 2). Boulez certainly used volatile and inflammatory language in his younger years and his relationship with Messiaen 'cooled' in the late 1940s. As is often the case, though, the impetuosity of youth eventually gives way to more considered reflections later in life.

⁴ Paul Griffiths, *Boulez* (London: Oxford University Press, 1978), p. 19. Peyser notes that when Boulez wrote this piece he only knew two works by Schoenberg: *Pierrot Lunaire* and the *Three Pieces for Piano* Op.11. Boulez told Peyser that when he was writing the *Trois Psalmodies* he was not aware of serial music but that he had a 'distinct sense of the need for it'. (Peyser, p. 32).

⁵ Peyser, p. 32.

absent in the Conservatoire at this time: as a teacher, Messiaen did not regard his students as objects to be moulded but rather instilled in them the ‘necessity of both determination and curiosity.’⁶

Messiaen’s view of Boulez was that he was ‘very nice’ at the start but ‘soon he became angry with the whole world. He thought everything was wrong with music.’⁷ Boulez’s unquenchable thirst for learning about ‘new’ music and, even more importantly, his increasing interest in the future direction of western music would eventually place him under the tutelage of René Leibowitz, albeit for a very short period of time:⁸

One evening in 1945 I heard a private performance of Schoenberg’s *Woodwind Quintet*, conducted by René Leibowitz. It was a revelation to me. It obeyed no tonal laws and I found in it a harmonic and contrapuntal richness and a consequent ability to develop, extend, and vary ideas that I had not found anywhere else. I wanted, above all, to know how it was written. Therefore I went to Leibowitz and brought with me other students from Messiaen’s harmony class. The first work we analysed was Webern’s *Opus 21 Symphony*. I was very impressed with this and made copies because the score wasn’t available at the time. I felt then the significance of this new language.⁹

In what would appear to be a gross exaggeration or a misreading of the facts, Peyser (or Peyser recounting what Boulez told her: it is not clear in the book) somewhat harshly suggests that ‘Leibowitz could talk analytic rings around Messiaen, who was not very sensitive to pitch or interval relationships’.¹⁰ To suggest that Messiaen was ‘not sensitive to pitch or interval relationships’ totally ignores the fact that much of Messiaen’s analysis took place at the piano, where he was able to illustrate these very things with great immediacy. Leibowitz, on the other hand, appears to have analysed music by looking at the score and took a more rigid academic approach. Peyser goes on to note that Messiaen’s analytical strength lay in his understanding of rhythm and metre,¹¹ which is undoubtedly true, and it was in the field of rhythm that Messiaen was to prove most influential for Boulez, as Boulez has acknowledged in countless articles and interviews:

It was thanks to him—sometimes even more than to his music—that I obtained an idea of contemporary music and its evolution, the personalities who played a part in

⁶ Pierre Boulez, ‘In Retrospect’, reproduced in *Orientations*, pp. 405–06 (p. 406).

⁷ Peyser, p. 31.

⁸ This is discussed in more detail in the section on Leibowitz in this chapter.

⁹ Peyser, pp. 32–33.

¹⁰ *Ibid.*, p. 33

¹¹ *Ibid.*.

that evolution and in the elaboration of a new language in which certain factors—rhythmical factors, for instance—had assumed a far greater importance than they had previously had.¹²

Boulez's prolific writings throughout his career, subsequently gathered in important publications such as *Orientations* and *Stocktakings of an Apprentice*, provide, amongst many other things, an important record of the people, music and events that strongly influenced him. Normally investigations of influences start with some form of conjecture or hypothesis, which must then be teased out to ascertain whether the assertion of an influence holds up, so it is very rewarding to have Boulez on record, as it were, recounting the influences in his life.¹³ For Boulez, though, an influence does not mean that one will end up copying or imitating the influencer. This supports Bloom's theory (discussed in Chapter 2) that the influenced one must turn away from his/her precursor. Several quotations by Boulez illustrate how he interprets the 'anxiety of influence'.¹⁴ Speaking to Célestin Deliège about the influence of Messiaen and Webern, he says,

I think that these are influences one undergoes and at the same time rejects [...] it means that you assimilate what attracts you and what is necessary, while rejecting constraints that don't seem fruitful enough. This would describe my attitude to Messiaen and Webern at that time.¹⁵

It should be stressed that when Boulez talks about assimilating what 'attracts', he does not mean mere imitation; a necessary negation is required. He inadvertently suggests that this is something Messiaen instilled in his students: 'Destruction does not mean that you hate something; you have to destroy it to possess it. I think Messiaen made us quite aware of that [...]'¹⁶ The intricate, and at times abstract, literary theories of Harold Bloom discussed in Chapter 2 are somewhat prefigured by Boulez in his article 'In Retrospect':

¹² Pierre Boulez, 'The Utopian Years', reprinted in *Orientations*, pp. 411–18 (p. 411). The text of this article is taken from a broadcast by the Südwestfunk in October 1978.

¹³ The same can be said of Messiaen, who recalls influences from his childhood in many publications.

¹⁴ This is the title of Harold Bloom's book, discussed in Chapter 2.

¹⁵ Célestin Deliège, *Pierre Boulez: Conversations with Célestin Deliège*, trans. by Ernst Eulenburg (1976) (Paris: Les Editions du Seuil, 1975), p. 12. (Originally published as *Par Volonté et par Hasard: Entretiens avec Célestin Deliège*).

¹⁶ Roger Nichols, 'Boulez on Messiaen: Pierre Boulez in Conversation with Roger Nichols', *Organists' Review*, 1986, 167–70 (p. 167).

[...] he [Messiaen] understood the necessary break between master and pupil once the pupil has served his apprenticeship. In order to establish his own personality he has to face the image of himself that he has seen being formed by his relationship with his teacher. Standing back in this way generally involves clashes and a certain amount of violence [...] I can see the healthiness of such a reaction and of the outbursts that it involved. Once free of an influence that threatened to become overwhelming and to dull my critical sense, I found it necessary to cut to the quick, as it were, in order to re-establish myself on a footing of equality.¹⁷

This eloquently sums up how Boulez views his early years as a student/composer in Paris. For Boulez, his attacks on composers or their music are all part of the learning process and a way of simultaneously absorbing and negating influences. There is no sense of an apology here (or in fact anywhere in Boulez's writings on Messiaen) for the things he said and wrote about Messiaen in the late 1940s. However, it is important to note that Boulez's thoughts on Messiaen, when written or recounted many years after this period (the mid 1940s) have an altogether more circumspect tone.

Boulez's first articles appeared in 1948, some two years after he had completed his studies with Messiaen and Leibowitz. In 'Propositions', published in *Polyphonie* 2 (1948), Boulez not only ridicules Leibowitz, but also criticises him for being critical of Messiaen's *Technique de mon langage musical* (specifically Messiaen's separation of rhythm from polyphony). The article is best known for one of the most quoted of all Boulez's comments; his central criticism of Messiaen is that his 'method never manages to tie in with his discourse, because he does not compose—he juxtaposes—and he constantly relies on an exclusively harmonic style of writing; I would almost call it accompanied melody.'¹⁸ Although this comment stands out, there are many others that show Boulez was deeply impressed with Messiaen's understanding of rhythm, particularly with concepts mediated through Stravinsky. The most radical and portentous part of the article (given that it was written in 1948) is Boulez's elevation of Webern over Schoenberg and Berg: he saw Berg and Schoenberg enslaved by the bar-line; in Webern he saw someone who 'succeeded in breaking down the regularity of the bar by his extraordinary use of cross-rhythm, syncopation, accents on weak beats, counter-accent on strong

¹⁷ Boulez, 'In Retrospect', p. 406. Bloom's book was published in 1973. Boulez's 'Rétrospective' was originally published in *L'artiste musicien de Paris*, 14, in 1966.

¹⁸ Boulez, Pierre, 'Proposals', in *Stocktakings from an Apprenticeship*, coll. by Paule Thévenin, trans. by Stephen Walsh (Oxford: Clarendon Press, 1991), pp. 65–72 (p. 50). Originally published as 'Propositions', in *Polyphonie*, 2 (1948).

beats, and other devices designed to make us forget the regularity of metre'.¹⁹ In Boulez's equally infamous *Schönberg est mort* article he proclaimed that 'all non-serial composers are *useless* (which is not to say that all serial composers are useful).'²⁰ Boulez saw that Schoenberg's music was 'doomed to stalemate' because it neglected rhythm, dynamics and modes of attack; such music, according to Boulez, is 'a body of work without intrinsic unity'.²¹ It is clear that these comments came hot on the heels of Messiaen's *Mode de valeurs* and Boulez's first attempt at total serialism in *Structures Ia*. Hodeir posits that Boulez was the first to see that Schoenberg's 'thematic conception' was incongruent with his serial technique and that Boulez inverted the 'established hierarchy' in which Webern was the third person of the 'Viennese Trinity'. In so doing 'he struck a mortal blow at the orthodox Schoenbergian doctrine as taught by Leibowitz.'²²

Boulez's confrontational personality was not confined to penning polemics. This is best evidenced by his behaviour at a performance of neoclassical works by Stravinsky in the winter of 1945. As stated in Chapter 2, Boulez and others began whistling and heckling and, although these students were not well known by name at this time, they were branded the 'Messiaenites' because of their association with Messiaen and his aversion to, or reservations about, neoclassical music. This branding was somewhat unfair since it was Leibowitz and not Messiaen who was the 'figure behind this demonstration'. Leibowitz reportedly described Stravinsky as the 'Telemann of the twentieth century.'²³

The 'reciprocity of influence' mentioned in the previous chapter is very important when assessing the relationship between Boulez and Messiaen. Through the testimonies of Boulez recounted here, Messiaen's influence on him was powerful. It is perhaps a little bit more difficult to determine or assess Boulez's influence on Messiaen. One way of approaching this is to take stock of

¹⁹ Boulez, 'Proposals, p. 49.

²⁰ Pierre Boulez, 'Schoenberg is Dead', in *Stocktakings from an Apprenticeship*, pp. 209–14 (p. 214). Originally published in *Relevés d'apprenti* and subsequently in English in *The Score*, 6 (February, 1952), 18–22.

²¹ *Ibid.*, p. 213.

²² André Hodeir, 'Serialism and Developments in Western Music Since Webern', trans. by Myers, in *Twentieth Century Music*, ed. by Rollo H. Myers (London: John Calder, 1966), pp. 29–39 (p. 30).

²³ Peyser, p. 33.

Boulez's compositional style in the mid 1940s. His early works, many of them unpublished, exhibit traits that show an acute awareness that the evolution of music was reaching an important watershed. For example, in *Le Visage Nuptial* Boulez experimented with quarter-tone writing; in the *Sonatine for Flute and Piano* and the first Piano Sonata Boulez absorbed some of the ethos of Schoenberg's compositional aesthetic but not in a literal or imitative manner.²⁴ During this period of Boulez's life, he was studying with Leibowitz and was introduced to Schoenberg's Opp.11 and 23 piano pieces. Messiaen would have been familiar with the music Boulez was producing and, even though he may not have been influenced by it *per se*, the very fact that Boulez was pushing the boundaries would not have gone unnoticed by Messiaen. When Boulez left Messiaen to take classes with Leibowitz, Messiaen must have been aware that something 'new' had attracted Boulez. Linked to this, Boulez was gradually becoming acquainted with the music of Anton Webern and in 1948 composed a substantial successor to his first Piano Sonata. This second sonata, renowned for its percussive textures and its utter negation of melody, saw Boulez completely break with the Schoenbergian concept of the series:

what interested me was the manipulation of tones in a functional, not thematic way. This can be seen clearly in the first movement; the series of intervals are tied to certain motives that reappear throughout the section. Then I gradually dissolve the intervallic cells to a point where they have only secondary importance in order to call attention to the rhythmic material.²⁵

The influence of Webern (and Messiaen, perhaps, with regard to rhythm) can be seen here; but, for Boulez, a seismic shift had been made: Schoenberg, the master, had been overthrown by Webern, his apprentice. Boulez showed extraordinary foresight in making this radical move in the late 1940s, as it would not be until the middle of the next decade that Webern's influence would be keenly felt in wider circles.²⁶ John Cage (who will be discussed in the final part

²⁴ Boulez strongly insists that the Schoenberg influence is not stylistic. See Deliège, *Pierre Boulez*, p. 28.

²⁵ Peyser, p. 49.

²⁶ Over the course of many years, Boulez's views on Schoenberg, Berg and Webern have continually shifted. It is worth noting that, despite his initial enthusiasm for Webern and some mild distain for Berg, Boulez eventually regarded Webern's music as relatively straightforward insofar as when it was analysed there was very little else to be discovered by coming back to it. In Chapter 1 I hinted that the same criticism could be levelled at *Structures Ia*; the issue with such music is that, once the underlying compositional process is revealed, and since this process *is* the music, there is very little else left to discover or discuss. He found that the opposite applied

of this chapter), also perceived a sense of progression in Webern's music but still saw it as being 'tied' to the past:

Boulez is responsible for the shift to Webern and I think I know why. Schoenberg's music is traditional. It continues the past magnificently. Whereas Webern *seems* to break with the past [...] For he shook the foundation of sound as discourse in favour of sound as sound itself. But in Webern the supremacy of pitch relations remain. And so he was really tied to an earlier time.²⁷

Before leaving Boulez it would be remiss at this juncture not to return briefly to his *Structures Ia* for two pianos. As already discussed (Chapter 1), there is a strong link with Messiaen's *Mode de valeurs*, as Boulez uses Messiaen's first twelve-tone division as the basis for the pitch material in *Structures Ia*, which I classified as both a borrowing and an influence (see Chapter 2). Two things are noteworthy about the work's first performance. Firstly, Boulez and Messiaen premiered the piece at the Comédie des Champs-Élysées on 4 May 1952; this would indicate that whatever rift may have developed between the two men—all by Boulez's actions of course—was now at an end. The second thing of interest was Stravinsky's attendance at this performance. Despite thinking that the music was 'arrogant', according to Jameux,²⁸ Stravinsky was keen to meet Boulez. They met formally in New York in the autumn of 1952 and one of the consequences of this was that Stravinsky helped out at rehearsals of Boulez's *Polyphonie X*. In 1955 Stravinsky, now firmly experimenting with serial techniques, penned an article in *Die Reihe* to commemorate the tenth anniversary of Webern's death. In it he says

[...] the day of Anton Webern's death should be a day of mourning for any receptive musician. We must hail not only this great composer but also a real hero. Doomed to a total failure in a deaf world of ignorance and indifference, he inexorably kept cutting his diamonds, the mines of which he had such a perfect knowledge.²⁹

The significance of this belated eulogy should not be underrated or underestimated. Both Messiaen and Boulez recognised the groundbreaking attributes of Stravinsky's *Le Sacre du Printemps* (they have both written

to Berg's music where the listener or analyst can get drawn into different layers or levels of interpretation. He tells Deliège that a work which reveals itself on one hearing is 'flat and lacking in mystery. The mystery of a work resides in its being valid at many different levels' (Deliège, *Boulez*, pp. 24–25).

²⁷ Peyser, p. 58. Cage goes on to tell Peyser that Satie was the composer who truly broke from the past.

²⁸ Jameux, *Boulez*, p. 51.

²⁹ Cited in Peyser, p. 98.

extensive analyses on the work's rhythmic features), but neither had any time at all for his neoclassical works.³⁰ There can be no doubt that *Le Sacre* was a highly influential piece for Messiaen and Boulez; equally, the changing cultural landscape after World War II (and Messiaen and Boulez's vanguard position therein) strongly influenced Stravinsky's subsequent embracing of some aspects of serial technique. And thus, the reciprocity of influence continues.

To conclude this brief section on Boulez, it is worth noting that Boulez and Leibowitz parted on bad terms. Leibowitz was critical of how fast Boulez was writing and made many corrections to the score of the first Piano Sonata, which outraged Boulez. Boulez attributed his break from Leibowitz to his teacher's 'pedantry' and for being 'imprisoned by academic techniques'; Leibowitz, in equally vitriolic tones, described Boulez as the most arrogant of the five or six Conservatoire students he had.³¹ After Schoenberg's death in 1951, Boulez recalls that he 'was not especially touched. Schoenberg was to me part of the mystic adoration of Leibowitz. The Leibowitz cult was as repressive to me, as repulsive as the Stravinsky cult. And Leibowitz was a joke. I never forgave his dishonesty. He was serviceable at the beginning, but I began to resent him when I saw how narrow and stupid he was.'³² These are strong words indeed, although it is not entirely clear what the 'dishonesty' was.

Returning to the mid 1940s, just as Boulez and Messiaen's relationship was developing and promising great things, France was liberated and a series of events precipitated a dramatic cultural and aesthetic shift, which would have colossal implications for the evolution of music and Messiaen's position therein.

3.3 René Leibowitz

The publication of Messiaen's treatise, *Technique de mon langage musical*, in 1944 marked an important landmark in the composer's position within the history of twentieth-century music. Such an audacious (and perhaps precocious) move illustrated a character brimming with confidence, and it could have been interpreted as a move towards a new 'School' of composition. However, nothing could have been further from Messiaen's mind: it was essentially written for his

³⁰ See the quotation in the next paragraph where Boulez describes the Stravinsky cult as 'repulsive'.

³¹ Peyser, p. 41.

³² Ibid., p. 75.

pupils at the Paris Conservatoire to aid his teaching. In focusing entirely on his compositional methodology, or rather the constituent parts that make up his language, and drawing the vast majority of the musical examples from his own works, Messiaen effectively turned his back on the Austro-Germanic canonic tradition and, while remaining essentially French in his aesthetics in certain respects, expounded compositional traits that would be forever and instantly recognisable as simply ‘Messiaen’. That within five years his compositional language could change so drastically with the appearance of the piano study *Mode de valeurs* in 1949 is the result of a series of events, influences (both positive and negative), and the changing cultural landscape after the war. As discussed in Chapter 2, determining how (not to mention why) a person is influenced by someone else is complex and in Messiaen’s case we are frequently dealing with reciprocal influences; for example, *X* influences *Y* in some respect and *Y*, in absorbing this influence, in turn influences *X*. This has been shown in the relationship between Boulez and Messiaen.

The emergence of René Leibowitz (1913–72) would cast a shadow over Messiaen’s recent good fortune. Reinhard Kapp notes that there is some uncertainty over claims that Leibowitz studied directly with Schoenberg and Webern;³³ what is undisputed is that he championed the serial music of the Second Viennese School throughout the 1940s, particularly after the untimely death of Webern. Born a Polish Jew, he spent most of the war in hiding in France but took centre stage when France was liberated in 1944 by conducting a performance of Schoenberg’s Op.26 Wind Quintet. Upon hearing this piece, Boulez was galvanised into seeking lessons with Leibowitz in twelve-tone technique.³⁴ Maurice La Roux, one of Boulez’s fellow students who also changed allegiance from Messiaen to Leibowitz, recalled that instruction in serial

³³ Reinhard Kapp, ‘Shades of the Double’s Original: René Leibowitz’s dispute with Boulez’, *Tempo*, 165 (1988), 2–16 (p. 4). According to Peyser, Leibowitz first heard *Pierrot Lunaire* in 1932 and went to Vienna to study with Schoenberg but had to settle for Webern since Schoenberg had gone to Berlin. She further claims that Schoenberg invited Leibowitz to attend classes for six weeks. As was often the case with Schoenberg, serial technique was not discussed and it was only when Leibowitz returned to Paris that he discovered serialism. (See Peyser, *Boulez*, p. 28.) Peyser provides no sources to support her claims that Leibowitz and Schoenberg met in the 1930s. Sabine Meine claims that Leibowitz only got to know Schoenberg in 1947–48 when Schoenberg invited him to Los Angeles. She also claims that Leibowitz’s first contact with Schoenberg came in 1945 when he started correspondence with him. See Meine, “‘Schönberg ist Tot’ Es lebe Schönberg!”, p. 20.

³⁴ Peyser, pp. 2–3.

technique was absent from Messiaen's classes, although he was better at some aspects of Schoenberg than at anything by Webern.³⁵ In fact we have a better picture now of what Messiaen did or did not do in his analyses of serial works. According to Mark Deleare, Karel Goeyvaerts's annotated score of Berg's *Lyric Suite* from Messiaen's analysis class shows that 'the rows are counted unsystematically, there is no indication of the symmetrical structure of the row, [and] canons and stretti are barely touched upon;' but 'Messiaen analysed the rhythmic canons, the retrograde rhythms and the thematic function of rhythm with great precision. [...] Nor does he overlook the creation of a chromatic motive in contrary motion.'³⁶ In later years Messiaen would acknowledge Webern as the true serial composer (despite Webern's problems in creating large-scale forms), and question whether Schoenberg was serial or not: 'I admit that Schoenberg is not my favourite composer [...] Webern was the "true" serial composer; Schoenberg and Berg were the precursors, and Boulez the realizer and "surpasser".'³⁷

Leibowitz never assumed a high-profile teaching position in Paris but in many ways this was to his advantage because, if he had been at the Conservatoire, the chances of him teaching serial techniques would have been slim. Leibowitz's sole aim was to resurrect the music of Schoenberg—and by implication Berg and Webern—after the Nazis had consigned their works to the wastebasket. As mentioned in Chapter 1, he partially realised his aims when, in 1947, he founded the International Festival of Chamber Music in which the music of Schoenberg, Berg and Webern was brought before the Parisian public for the first time.³⁸ Among the works performed was Webern's Symphony Op.21; this was also the first work that Leibowitz brought to the attention of his

³⁵ Boivin, p. 37.

³⁶ Mark Deleare, 'Messiaen's Analysis Seminar and the Development of Post-War Serial Music', trans. by Richard Evans, *Music Analysis*, 21 no. 1 (2002), 35–51 (p. 45). Deleare notes that the technique of chromatic contrary motion results in an all-interval twelve-tone row and that this is what Messiaen used in his first interversion in *Île de feu* 2 (p. 49). Deleare's article goes on to suggest that Messiaen probably had a greater understanding of Schoenberg's serialism than was at first thought. Deleare says that Goeyvaerts's annotated score of Schoenberg's Op.24 Serenade 'must be attributed to Messiaen on account of the contextual criteria, in spite of the fact it is not mentioned by other students. It provides a much more detailed picture of Messiaen's knowledge of row technique.' (p. 45).

³⁷ See Samuel, *Music and Color*, p. 192. See also the quotation in Section 4.5 (Samuel, p. 183).

³⁸ Dominique Jameux, 'Leibowitz, René', in *The New Grove Dictionary of Music and Musicians*, ed. by Stanley Sadie (London: Macmillan, 1980), X, 627–28 (p. 627). As mentioned in Chapter 1, Messiaen was in the audience for the performance of Webern's Op.21 Symphony, conducted by Leibowitz. (See Boivin, p. 62).

new ‘followers’ in 1944. Leibowitz then went on to write several books on serial music, including *Schönberg et son école* (1947, translated into English in 1949 by Dika Newlin) and *Introduction à la musique du douze sons* (1949). To further his claim and belief that serialism should assume its rightful position as the world’s new and most sophisticated musical language, Leibowitz published an article on an Italian pupil of his, André Casanova, whom he claimed arrived at a form of serialism despite Leibowitz’s deliberate avoidance of discussing this during their meetings/lessons. In what could be seen as a response to what was happening around him, Leibowitz concluded this article by suggesting that young composers ‘lack responsibility’ and that those who have adopted the twelve-tone technique ‘think that this is enough to become “modern” or “advanced”’. Most of them forget that in order to compose valid music, one must not only have ideas but that it is equally necessary to know what to do with them.’³⁹

Leibowitz wanted his students to immerse themselves in the music, and to be thorough, questioning and thoughtful. I doubt that these are epithets he would associate with the new generation and, in particular, Boulez. When Boulez proceeded to apply twelve-tone techniques to every element, Leibowitz is reported to have said: ‘But the public has not yet assimilated Schoenberg’.⁴⁰ According to Theo Hirsbrunner, Leibowitz demanded total submission from his students, which was in stark contrast to Messiaen’s approach (Messiaen did not want his students to ‘follow him’). Boulez took the view that Leibowitz was not sufficient enough a musician to demand such a following.⁴¹

The purpose of all of Leibowitz’s books and articles was to reinforce his point that serialism was the logical outcome of romanticism, which he extols at great length in *Schönberg et son école* concluding that ‘continuity – not a violent break – is the *principal* element in the transition from one musical system to another’.⁴² It is interesting to read Milton Babbitt’s review of *Schoenberg and*

³⁹ See René Leibowitz, ‘A New French Composer: André Casanova’, *Music Survey New Series 1949-1952*, 2 no.3 (1950), 148–54, (p. 154).

⁴⁰ Jan Maguire, ‘René Leibowitz’, *Perspectives of New Music*, 21 (1982–83), 241–51 (p. 245). This article also gives a short account of Leibowitz’s musical output. For a more detailed account see Maguire, ‘René Leibowitz (II): The Music’, *Tempo*, 132 (1980), 2–10.

⁴¹ Theo Hirsbrunner, ‘Messiaen und Boulez’, in H. Danuser et al, eds, *Das Musikalische Kuntswerk [Dahlhaus Festschrift]* (Kaaber, 1988), 753–66 (p. 753).

⁴² René Leibowitz, *Schoenberg and his School*, trans. by Dika Newlin (New York: Philosophical Library, 1947/49), p. 22. Adorno also strongly believed in the historical necessity of serialism and regarded Stravinsky’s attempts at ‘Restoration’ as, in part, a product of mass culture.

his School. He quickly senses Leibowitz's tone: '[he] is much more concerned with establishing such generalities as the historical continuity of Schoenberg's music, with Schoenberg's role as "reactivator" of the polyphonic principle, than with determining the technical climate of his music.' Later, in the same review, Babbitt notes that in discussing rhythm Leibowitz gives examples that 'are in no sense primarily related to the twelve-tone conception [...] Thus there arises the reality of a rhythmic structuralization totally identical with the tonal structuralization', which Leibowitz totally misses.⁴³ This was all part of an intellectual and aesthetic culture in all the arts whose basic tenet was that, according to Dahlhaus, for a composer's (artist's) work not to be considered 'superfluous', he had to 'entrust himself to the course of history'.⁴⁴ Dahlhaus points out, however, that by the 1970s this notion of a singular 'history' was replaced by the concept of a multitude of histories consisting of 'events and chains of events which, at times autonomous and at times interwoven, emanate from a whole range of heterogeneous origins and lead to diverging results'.⁴⁵

It is understandable that, in the cultural climate of the first half of the twentieth century, writers such as Adorno and Leibowitz would try to promulgate the superiority of serialism. Boulez, in conversation with Deliège also notes the great continuity of/in German music and the corresponding lack of continuity in French music, drawing the conclusion that 'it is quite mad to speak of a "French Tradition"'.⁴⁶ Whether a 'French Tradition' existed or not, Messiaen is inextricably part of something that is non-Germanic. Boulez suggests that the whole Austro-German tradition is 'alien to him [Messiaen] in its need to express *evolution* and *continuity* in the handling of musical ideas [...] Just as we can speak of eclecticism in his choice of composers, so his actual style of writing—juxtaposing and superimposing rather than developing and transforming—may be called eclectic'.⁴⁷ Finally, it should be stressed that

⁴³ Milton Babbitt, 'Review of *Schoenberg and his School*', *Journal of the American Musicological Society*, 1950, 57–60 (pp. 57, 59).

⁴⁴ Carl Dahlhaus, *Schoenberg and the New Music*, trans. by Derrick Puffett and Alfred Clayton (Cambridge: Cambridge University Press, 1987), p. 64.

⁴⁵ Dahlhaus, *Schoenberg*, p. 64.

⁴⁶ Deliège, *Pierre Boulez*, p. 19.

⁴⁷ Boulez, 'Vision and Revolution', reproduced in *Orientations*, pp. 406–11 (p. 407). Originally the text of a BBC programme in May 1973.

Boulez would not conform to Leibowitz's almost linear view of historical continuity. In addressing the issue he says

historical continuity is based precisely on this excess of tension⁴⁸ which collapses abruptly, begins again from zero, and recharges itself until the next point of collapse. For me, history is not at all a continuing process, but rather a wave-form that passes through positive points, falls back to zero, then moves through negative points and then back again [...] My vision of history is in fact sine-shaped.⁴⁹

Although Leibowitz disappeared into relative obscurity in the 1950s, he enjoyed a prominent social and cultural position in Paris in the mid- to late-1940s. He mixed with leading poets, artists, musicians and philosophers⁵⁰ and was friendly with the existentialist Jean-Paul Sartre (editor of the journal *Les Temps Modernes*), who published two sizeable articles written by Leibowitz on Stravinsky⁵¹ and Bartók.⁵² Leibowitz was also invited to teach at Darmstadt (in its first year, 1946, and on several occasions after that), and did much to propagate the serial cause by giving many premieres of works by Schoenberg and his followers. Jan Maguire claims that with the help of Sartre, Leibowitz gave the twelve-tone row an existentialist definition: 'the row chosen by the composer, in which the whole composition resides, is the *existent* of the composition, which then elaborates its *essence*'.⁵³ Although it is highly questionable whether Messiaen would ever have contemplated Existentialism, there is much in *Technique de mon langage musical* and in the *Traité* that merits further research in this respect. Two brief quotations from Messiaen's first treatise share a startling similarity to the Leibowitz/Sartre existentialist definition of the 'row':

Let us always work melodically; rhythm remains pliant and gives precedence to melodic development, the harmony chosen being the 'true', that is to say, wanted by the melody and the outcome of it.⁵⁴

⁴⁸ The meaning of the term 'tension' in this context is that progress is made through the destruction and negation of the past, despite the paradox of cherishing that which has been destroyed.

⁴⁹ Deliège, *Pierre Boulez*, p. 22.

⁵⁰ Jan Maguire, 'René Leibowitz', *Tempo*, 131 (1979), 6–10 (p. 7).

⁵¹ Leibowitz, 'Igor Stravinsky ou le choix de la misère musicale', *Les Temps Modernes*, 1 no. 7 (1946), 1320–36. ('Igor Stravinsky or the choice of musical misery'.)

⁵² Leibowitz, 'Béla Bartók, ou la possibilité du compromis dans la musique contemporaine', *Les Temps Modernes*, 3 no. 25 (1947), 705–34. ('Béla Bartók, or the possibility of compromise in contemporary music'.)

⁵³ Maguire, 'Leibowitz', (1979) p. 6.

⁵⁴ Messiaen, *Technique*, I, p. 31.

[...] the harmony especially shall always remain ‘true’, which exists in a latent state in the melody, [and] has always been the outcome of it.⁵⁵

Leibowitz’s direct contact with Messiaen appears to have been minimal, although they were certainly aware of one another. The effect of Boulez and several other keen students switching allegiance from Messiaen to Leibowitz must, at the very least, have made Messiaen curious about Leibowitz and what he was teaching. Messiaen’s own views on serial music were well known: in a class in the Conservatoire in 1944, whilst discussing Schoenberg’s *Pierrot Lunaire* (granted, this is not a serial composition) and Berg’s *Lyric Suite*, he vehemently criticised their (Schoenberg and Berg’s) ‘unilateral’ interest in pitch.⁵⁶ The fact that Messiaen would soon develop techniques for working with all twelve tones (albeit forging it to suit his needs—see chapters five to nine—much in the same way as Stravinsky would do from the early 1950s) is indicative of a person who was conscious of the emerging avant-garde and, in light of this, Leibowitz deserves some credit. Of greater significance, it could be argued, is a highly damning article written by Leibowitz in 1945, ‘Olivier Messiaen or Empirical Hedonism in Contemporary Music’,⁵⁷ which appeared in the journal *L’Arche* just one year after the publication of Messiaen’s treatise.⁵⁸

As mentioned earlier, Leibowitz firmly believed in the historical imperative of serialism and in this respect he pre-empted much of Adorno’s writing in his *Philosophie der neuen Musik* (1949, translated into English in 1973 and 2006). Leibowitz also refers to the evolution of music in his article on Messiaen saying: ‘Above all, to compose music means to participate in an authentic and necessary way for this evolution, without which one perhaps manages to satisfy certain personal needs, but nothing more.’⁵⁹ Leibowitz’s pejorative use of the word ‘hedonism’ in the title of the article provides the crux of his central criticism of Messiaen (and others) as illustrated in the above quotation: namely, that the pursuit of a musical language or style outside of the natural evolution of music

⁵⁵ Ibid., p. 13 (quotation emended).

⁵⁶ Goléa, *Rencontres avec Olivier Messiaen*, p. 247. See also Section 4.5 for an assessment of Messiaen’s views on serialism.

⁵⁷ René Leibowitz, ‘Olivier Messiaen ou l’Hédonisme Empirique dans la Musique Contemporaine’, *L’Arche*, 9 (1945), 130–139 (p. 132).

⁵⁸ Parts of this discussion of Leibowitz’s critique of Messiaen are published in Paul McNulty, ‘Messiaen’s Journey Towards Asceticism’, in *Messiaen Studies*, pp. 63–77.

⁵⁹ ‘Composer de la musique signifie avant tout participer de façon authentique et nécessaire à cette évolution, sans quoi on arrive peut-être à satisfaire certains besoins personnels, mais rien de plus.’ Leibowitz, ‘Olivier Messiaen’, p. 132.

results in music whose only function is to satisfy the composer himself—‘hedonism’, by definition, meaning the pursuit of one’s own pleasure with the connotation that it is selfish because it involves self-indulgence. As mentioned in Chapter 1, composers who invent their own musical language run the risk of speaking to no-one but themselves.

Leibowitz’s article begins positively by acknowledging that Messiaen is a much-performed composer who is not part of the ‘degrading musical atmosphere that reigns in Paris’;⁶⁰ this is more than likely a reference to neoclassicism. Whilst initially complimenting Messiaen on striving for a personal language—which is a little contradictory as the whole article lambastes such an approach—Leibowitz quickly interjects a word of warning by describing the desire of composers to arrive at all costs at a personal language as one of the great scourges of the time. He argues that the great masters accepted a *universal language* and originality never failed them.⁶¹ From here on the tone of Leibowitz’s article becomes at best, critical, and at worst, vitriolic. He takes Messiaen to task for discussing the individual parameters of music, i.e. pitch, rhythm and so on, separately. Leibowitz believed that the act of composition should encompass all the parameters (including timbre, which Messiaen only briefly mentions in the preface to the *Technique*), from the outset and simultaneously, rather than working on each parameter separately. We have seen that Boulez also came to this conclusion. Leibowitz says:

Without the participation of each of these elements, the polyphonic musical discourse is not conceivable. Why all these distinctions, these separations, this *a priori* hierarchy, which seem to give Messiaen a false conception of the act of musical composition?⁶²

This raises an interesting paradox: as a composer and teacher immersed in serial technique, Leibowitz conveniently ignores the whole act of pre-composition involved in the creation of a twelve-tone row and the inevitable hierarchical role

⁶⁰ ‘[...] l’atmosphère musicale avilissante qui règne à Paris’, Leibowitz, ‘Olivier Messiaen’, p. 130.

⁶¹ Leibowitz, ‘Olivier Messiaen’, p. 132.

⁶² ‘Sans la participation d’un quelconque de ces éléments, le discours musical polyphonique n’est pas concevable. Pourquoi alors ces distinctions, ces séparations, cette hiérarchie *a priori*, qui semblent dénoter chez Messiaen une conception fautive de l’acte de composition musical.’ Leibowitz, ‘Olivier Messiaen’, p. 131.

of pitch. Indeed, it was the serialists' predilection for pitch, as mentioned earlier, which gave Messiaen cause for concern.⁶³

In *Schönberg et son école* Leibowitz censures Stravinsky (albeit in a footnote), and pontificates that 'the genuine polyphonic tradition *does not admit the idea of rhythm for its own sake* [...] the "purely rhythmic" experiments of certain contemporary composers [he refers to Stravinsky in a footnote at this point] seems to me not only mistaken, but quite meaningless.'⁶⁴ Leibowitz's disdain for rhythmically conceived works is also seen in his article on Bartók:

The true polyphonic composer is the one who creates *complete* architectures of sound [...] in which melody, harmony and rhythm are conceived as a synthesis and form an indissoluble whole [...] a 'purely rhythmic' exploration results in the impoverishment of the whole polyphony.⁶⁵

Whilst somewhat admiring Messiaen's rhythmic innovations, Leibowitz nonetheless describes Messiaen's assertions that rhythms can be augmented or diminished by the addition or subtraction of dots or short notes as 'truisms', with little value in themselves.⁶⁶ He also initially commends Messiaen for his development of ametrical rhythms, but goes on to make a very valid criticism: if such ametrical rhythms are simply restated without development or change they start to feel normal or regular.⁶⁷ To further his argument, Leibowitz focuses on several musical excerpts from Messiaen's *Technique de mon langage musical*. In 'Les Anges' from *La Nativité du Seigneur* Messiaen highlights a typical ametrical bar created by the addition of a semiquaver:

⁶³ Messiaen always held the view that rhythm existed long before melody, (which is not to imply that melody (or harmony) takes second place for him), and should be given equal consideration. The importance of rhythm is evidenced by the substantial first volume of the *Traité de Rythme*, which is devoted entirely to this subject. It is not insignificant that Messiaen chose rhythm rather than melody (pitch) or harmony to open his seven-volume treatise.

⁶⁴ Leibowitz, *Schoenberg and his School*, p. 247.

⁶⁵ Cited in Kapp, 'Shades of the Double's Original', p. 9. Leibowitz's article originally appeared in *Les Temps Modernes*, October (1947), 705–734, and subsequently in *Musik-Konzepte*, 22, 'Béla Bartók', p. 19 ff.

⁶⁶ 'lapalissades'. Leibowitz, 'Olivier Messiaen', p. 133.

⁶⁷ He does not go as far as saying 'metrical' but the implication is there.

Ex. 3.1 'Les Anges': Ametrical Rhythm



Again, Leibowitz initially compliments Messiaen on the originality of the rhythm but goes on to complain that, by simply repeating it in the following bar, the irregular pulse becomes, in effect, regular. In other words, any effect of asymmetry is lost. He describes the result as 'vulgar repetition' and music that is flat and impoverished.⁶⁸ Further on, Leibowitz notes that in 'Danse de la fureur, pour les sept trompettes' from the *Quatuor pour la fin du Temps* (Example 12 in Messiaen's *Technique*), despite a relatively complex rhythmic structure, great portions of the material are literal repeats. This is a valid observation and proves, according to Leibowitz, Messiaen's lack of understanding of 'variation'. He says that this renders the exercise pointless:⁶⁹ 'Doesn't he know that the evolution of musical forms in the West is dictated primarily by the idea of the *variation of the recapitulations*?'⁷⁰ In Messiaen's defence, it should be noted that he does spend a considerable amount of time discussing 'development' in the fourth section of Chapter 12 of his treatise, particularly in his analysis of the seventh movement of the *Quatuor*, and Leibowitz does at least acknowledge this.

On the Modes of Limited Transposition Leibowitz denounces Messiaen for claiming a new discovery, since Busoni, Capellen and others had worked out similar modes at the turn of the century.⁷¹ Leibowitz is correct, insofar as Mode 1 is the whole-tone scale and Mode 2, the octatonic scale,⁷² but he does not acknowledge the element of ingenuity on Messiaen's part in creating other

⁶⁸ ' [...] ce qui détruit l'effet d'asymétrie voulu et devient vulgaire répétition'. Leibowitz, 'Olivier Messiaen', p. 134.

⁶⁹ Indeed, this criticism is similar to Boulez's 'juxtaposition' gripe cited earlier.

⁷⁰ 'Ne sait-il pas que toute l'évolution des formes musicales en Occident est commandée essentiellement par l'idée de la *variations des réexpositions* ?', Leibowitz, 'Olivier Messiaen', p. 136.

⁷¹ Ibid., p. 137.

⁷² In *Technique* I, p. 59, Messiaen acknowledges that forms of this scale have appeared in works by Rimsky-Korsakov, Ravel and Stravinsky. It is important to stress that the term 'octatonic' did not enter the lexicon until the 1960s.

modes based on the inherent principle of ‘limited transposition’. Leibowitz’s criticism here takes a cruel metaphorical slant in that he ridicules Messiaen’s excitement in discovering (or creating) something new by comparing it to children who, when they throw a stone into water, think they have radically altered nature and made an important discovery (ripples).⁷³ Regardless of origins and authenticity, Leibowitz asserts that, since the entire chromatic range is now available, it is pointless developing such artificial and empirical systems.⁷⁴ To further his argument he quotes a substantial passage from Schoenberg’s *Harmonielehre*. His reason for doing this arises from an apparent contradiction by Messiaen in connection with his analysis of an excerpt from ‘Le Mystère de la Sainte Trinité’ from *Les Corps Glorieux*. Messiaen claims that the middle voice is based on various transpositions of Mode 2 but that the upper voice and pedal are written in an atonal style with a ‘general sensation of the key of D’. Leibowitz asks what is meant by an ‘atonal style’? If the two lines are centred on ‘D’ ‘then’, he says ‘this is a lot of noise about nothing’.⁷⁵ This criticism of Messiaen’s understanding of his own material is scathing but Leibowitz adds one final insult with a quotation from Shakespeare’s *Hamlet*: ‘something is rotten in the state of Denmark’.⁷⁶ This attack is all the more personal when one recalls that Messiaen’s father translated the complete works of Shakespeare; judging by the overall tone of Leibowitz’s article, this was more than likely a deliberate slur.

Schoenberg’s argument against new scales is that one must either work within tonality and maintain such scales or, to paraphrase him, one is merely flirting with freedom while retaining one’s bonds: ‘What other purpose should the formulation of a scale have if not to create a specific tonality? Is it for the sake of melody? Does melody need certification by a particular scale? Is not the chromatic scale enough?’⁷⁷ Schoenberg’s argument is strong and it certainly makes sense in the context of serialism but Leibowitz fails to notice a vital

⁷³ Ibid., p. 132.

⁷⁴ Ibid., p. 137.

⁷⁵ ‘[...] il y a dans tous ces commentaires beaucoup de bruit pour rien.’ Leibowitz, ‘Olivier Messiaen’, 137. To clarify matters: Messiaen first discusses Ex. 310 in *Technique*, I, p. 57, in the context of ‘Upbeats and Terminations’. The example is used again in I, p. 67, under the section entitled ‘Relation of these Modes to Modal, Atonal, Polytonal, and Quarter-tone Music’.

⁷⁶ ‘[...] il y a quelque chose de pourri dans la royaume du Danemark.’ Leibowitz, ‘Olivier Messiaen’, p. 137.

⁷⁷ Arnold Schoenberg, *Theory of Harmony*, trans. by R. Carter (London: Faber and Faber, 1978), p. 395. (Originally published as *Harmonielehre* in 1911).

difference between a twelve-tone row and one of Messiaen's modes: in the former each pitch is (theoretically) of equal importance, although there do tend to be gravitational pulls, whereas in the latter, the tonic (such as it is) still retains its pulling power and there is a form of a nodal point with the presence of the augmented fourth.⁷⁸

The aforementioned augmented fourth is another point of frustration for Leibowitz. In *Technique de mon langage musical* Messiaen says that 'a very fine ear clearly perceives an F-sharp in the natural resonance of a low C'.⁷⁹ Leibowitz makes the valid point that all notes/harmonies can be heard in the resonance of a low note—this is, after all, how the harmonic series functions—and that there is no justification for the augmented fourth's privileged position. Likewise, why single out the descending major sixth of Mozart to justify his (Messiaen's) added sixth chords since Mozart made use of all other intervals? Leibowitz concludes by saying that if such intervals are so important to Messiaen, then so be it, but 'do not speak to me about language, but only about a particular means of expression, of a simple event in the private life of our musician'.⁸⁰

This extensive broadside on Messiaen came at a time when Leibowitz was building a name for himself and emerging as a possible leader of new music in Paris. To the best of my knowledge, Messiaen never referred to this article in any of his writings or interviews (although that does not prove he was unaware of it), but it is indicative of the highly charged atmosphere in Paris at this time. As will be seen in Chapter 8 Messiaen does refer briefly to Leibowitz in his *Traité de rythme* and actually indulges in some slight ridiculing.⁸¹ It was inevitable that with the defeat of Nazi Germany the music of the Second Viennese School would be resurrected, played, analysed and evaluated, and Leibowitz has to be credited with playing a pivotal, or *the* pivotal, role in this. History has a tendency to relegate people like Leibowitz to the margins, particularly when their time in the limelight is short and they quickly disappear. The *Oxford Music Online* article (although very short) at least acknowledges Leibowitz's 'crucial role in the dissemination of the music of the Second

⁷⁸ See Section 4.3 for a comparison of Messiaen's modes of limited transposition and serialism.

⁷⁹ Messiaen, *Technique*, I, p. 31. Messiaen makes this point again on p. 47.

⁸⁰ '[...] que l'on ne me parle pas alors de langage, mais seulement d'un moyen d'expression particulier, d'un simple événement de la vie privée de notre musicien.' Leibowitz, 'Olivier Messiaen', p. 135.

⁸¹ Messiaen also referenced Leibowitz in his discussion of serialism. See Section 4.5.

Viennese School'.⁸² Even without Leibowitz, the music of the Second Viennese School would have resurfaced eventually and become important for the post-1945 generation.

History forces us to look at the facts: Leibowitz was integral in reshaping and revitalising Parisian musical life in the 1940s and we must remember that this is the same world with which Messiaen was intricately involved. Leibowitz's influence on Messiaen could best be described as 'indirect'. In this regard, Boulez acts as a conduit: Boulez absorbed what Leibowitz had to offer and his works written after this encounter owe some debt of gratitude to his being introduced to serial music; these new works in turn influenced Messiaen, in what I have described as a reciprocal influence. Ultimately, according to Sabine Meine, Boulez was responsible for Leibowitz's eventual isolation: 'The conflicts with Pierre Boulez, as the spokesman of the French avant-garde of the post-war era, and with Arnold Schoenberg reflect Leibowitz's isolated position between the generations.'⁸³ Meine also notes that Leibowitz taught at Darmstadt in 1954–55⁸⁴ (as discussed in Chapter 1, he was an important figure in Darmstadt in 1948). The fact that he was asked back in the 1950s shows that he was still respected by the musical community, but his predilection for Schoenberg over Webern made him appear conservative rather than progressive. The post-1945 generation of composers saw in Webern's approach a way for serialism to progress. This, according to Boulez, was one of Leibowitz's failings as a teacher: in addition to a rigorous academic approach (which did not suit Boulez), Leibowitz offered no thoughts on how serial music could continue to evolve.⁸⁵ It is difficult to find anything positive about Leibowitz in Boulez's writings; in the quotation cited towards the end of Section 3.2 above, Boulez pejoratively used the word 'serviceable' to evaluate what he got from Leibowitz. Granted, Leibowitz was no Schoenberg, Berg or Webern, but without him and what he

⁸² Sabine Meine, 'Leibowitz, René', in *Grove Music Online/Oxford Music Online*. (Oxford University Press), <<http://0-www.oxfordmusiconline.com.ditlib.dit.ie/subscriber/article/grove/music/16331>> [accessed 10 February 2013].

⁸³ 'Die Konflikte mit Pierre Boulez als Wortführer der französischen Avantgarde der Nachkriegsära und mit Arnold Schönberg spiegeln Leibowitz' isolierte Position zwischen den Generationen.' Sabine Meine, "'Schönberg ist Tot' Es lebe Schönberg!", (p. 19).

⁸⁴ Sabine Meine, Leibowitz, René' in *The New Grove Dictionary of Music and Musicians*, 2nd edn, ed. by Sadie, XIV (2001), pp. 501–02.

⁸⁵ See Peyser, pp. 39, 44, and 75. The fundamental difference between Leibowitz and Boulez was that the former was inspired by Schoenberg and the latter (initially), by Webern.

fostered the emergence of total serialism may have been different, or happened much later. And, as Messiaen's *Mode de valeurs* marks a crucial step towards total serialism, Leibowitz's contribution must be regarded as influential.

3.4 John Cage

If some of the events and influences described in the previous sections could be described as 'negative', Messiaen's encounter with John Cage was most certainly a positive experience. It was just before embarking on his summer teaching courses in Darmstadt and Tanglewood that Messiaen became acquainted with the American experimental composer John Cage. Between 1946 and 1948 Cage composed his *Sonatas and Interludes* for prepared piano and in 1949 this work enabled him to obtain a grant to spend six months in Europe. Kenneth Gartner notes that by 1945 it seemed that sonorities on the piano could go no further; he particularly highlights how Bartók's use of clusters increased after meeting Cowell in 1923; he also suggests that Cowell's *Banshee* may have influenced Cage's development of the prepared piano.⁸⁶ Both Cowell and Ives were interested in acoustic experiments and were 'constantly challenging themselves to find and utilize new sound sources.'⁸⁷ It is interesting to note that these waves of influence from America (not forgetting Varèse, mentioned in Chapter 1) were primarily centred on timbre. The other strong influence in the creation of the *Sonatas and Interludes* comes from Indian aesthetics, in particular Coomaraswamy's presentation of the 'rasa' in his book *The Dance of Shiva*.⁸⁸ John Pritchett notes that the *Sonatas and Interludes* are an attempt to express the 'eight permanent emotions'. Although the work is not programmatic, Pritchett says that the final four pieces are more 'tranquil' than the others; tranquillity is the 'common tendency' of each of the permanent emotions.⁸⁹ Cage's interest in Indian culture has a strong affinity with Messiaen's interest in the East.

Cage departed for Paris on 23 March 1949 and upon his arrival introduced himself to Boulez, who in turn introduced him to Messiaen. Messiaen

⁸⁶ Cage confirms that he 'particularly loved' Cowell's *The Banshee*. See John Cage, 'How the piano Came to be Prepared', in *Empty Words* (London: Marion Boyars, 1980), pp. 7–9 (p. 7).

⁸⁷ Kenneth, Gartner, 'The Expansion of Pianism since 1945', pp. 30, 39.

⁸⁸ A 'rasa' is the aesthetic quality of the eight permanent emotions (erotic, heroic, the odious anger, mirth, fear, sorrow and the wondrous). See John Pritchett, *The Music of John Cage* (Cambridge: Cambridge University Press, 1993), p. 29.

⁸⁹ Pritchett, pp. 29–30.

invited Cage to play the *Sonatas and Interludes* at the Salle Gounod of the Conservatoire on 7 June. Another (private) performance was scheduled for 17 June at Suzanne Tézena's salon.⁹⁰ Although Messiaen was in attendance at this second performance, it was his former pupil Boulez who introduced John Cage and the piece to those assembled. Having explained the concept of inserting various objects between the strings of the piano, i.e. the workings and theory of the prepared piano, Boulez went on to say that 'from this he [Cage] deduced the necessity of modifying duration, amplitude, frequency, and timbre – in other words, the four characteristics of a sound'.⁹¹ Cage had observed that by inserting objects between the strings of the piano the four characteristics of sound were altered and, crucially, in terms of a prepared piano the timbre of each note was fixed for the duration of the piece, although a pitch's timbre could be altered with the use of the *una corda* pedal. David Nicholls notes that, with such music, the link between notation and sound becomes 'very tenuous': an analysis can only discuss form and rhythm.⁹² This issue re-emerges with the ultra-specific registrations in Messiaen's *Livre d'orgue*: this will be discussed in chapters 8 and 9.

Boulez's comments before the performance are critical as they veritably foreshadow Messiaen's approach in *Mode de valeurs et d'intensités*: Boulez reiterated that Cage was 'giving at the outset an originality to each sound'.⁹³ The obvious parallel with Messiaen's approach in *Mode de valeurs* is that here, too, each note has a specific timbre (defined by register, duration, dynamic and articulation markings) fixed for the duration of the piece, albeit requiring phenomenal concentration and tone control from the performer. Was Messiaen attempting to create a prepared piano but without recourse to the physical implements Cage used?

⁹⁰ Nattiez, *Boulez-Cage Correspondence*, p. 5.

⁹¹ Nattiez, p. 30.

⁹² David Nicholls, *American Experimental Music 1890–1940* (Cambridge: Cambridge University Press, 1980), p. 212.

⁹³ Nattiez, p. 31. An interesting corollary to this is a criticism Boulez made of Cage, which is documented in Joan Peyser's book. He said it was interesting to hear the new sounds of the *Sonatas and Interludes* but that in the end it was not very exciting because 'the same sound always returns in the same way. One needs neutral material 'A' to become different in a different context. 'A' cannot remain the same through different structures' (see Peyser, p. 85). One of the things that most attracted Boulez to Webern was the composer's concise manner of writing. For Boulez, this meant that repetition was now utterly reprehensible and pointless.

The performance of Cage's *Sonatas and Interludes* had a profound effect on Messiaen, according to Karel Goeyvaerts. Goeyvaerts, a student of Messiaen, who himself would shortly experiment with total serialism in his Sonata for Two Pianos, recalled that 'the crisp sounds of his [Cage's] gamelan piano and the precise rhythm of the sonatas kept us spellbound. Messiaen claimed that this was his most riveting musical experience since he first discovered Sharngadeva's *Deçi-tâla*.'⁹⁴ Messiaen may well have enjoyed the experience and acknowledged the work's innovative features, but he downplayed its significance when talking to Claude Samuel about it: Cage 'transformed the piano into a sort of immense storehouse of tones covering more than seven octaves. Each note possessed its own timbre, its own attack, its own sonority. It was a brilliant idea without far-reaching effects, except indirectly, with the appearance of electroacoustic techniques.'⁹⁵

Goeyvaerts's use of the word 'gamelan' is apposite. Messiaen was intimately acquainted with Stravinsky's *Les Noces* (as mentioned in Section 2.3.1, this was one of the works Messiaen had with him when he was imprisoned in 1940), and it has been suggested by several people that the influence of *Les Noces* on the *Trois petites Liturgies* is immense. For example, Matthew Schellhorn notes that the *Liturgies* see Messiaen's first significant use of percussive sonorities and that Messiaen was already thinking about composing a 'ritual' work as soon as he was released.⁹⁶ One of the most striking features of *Les Noces* is that it is scored for an all-percussion ensemble: even the pianos are used percussively. André Hodeir suggests that *Les Noces* 'may be considered a westernized version of the Balinese *gamelan* orchestra.'⁹⁷ It may well be that Messiaen heard in Cage's *Sonatas* traces of the fascinating timbres Stravinsky had created in *Les Noces*. It is also possible to trace this 'gamelan' sonority

⁹⁴ Karel Goeyvaerts, 'Paris-Darmstadt 1947-1956', (p. 40).

⁹⁵ Samuel, p. 171.

⁹⁶ Matthew Schellhorn, 'Les Noces and Trois Petites Liturgies: An Assessment of Stravinsky's influence on Messiaen', *Olivier Messiaen: Music, Art and Literature*, pp. 39–61 (p. 42).

Schellhorn also suggests that the two works share so much that it cannot be a coincidence: 'the profound dependence on *Les Noces* of *Trois petite Liturgies* is apparent in its very ethos [...]' He goes on to say that Stravinsky's influence on Messiaen is probably greater than Messiaen ever admitted. (p. 49, p. 60).

⁹⁷ Hodeir, *Since Debussy*, p. 29.

further back to Debussy.⁹⁸ In the piano works up to 1949 Messiaen continually experimented with the piano's sonorous capabilities, going much further than Debussy. In Hsu's discussion of *Regard de l'Espirit de joie* (the tenth piece of the *Vingt regards*), she notes how Messiaen evokes (or imitates) a wide range of instruments: chimes, Chinese gongs, drums, tom-tom, xylophone, harp, flutes, trombones, horns (to name but a few).⁹⁹ The fundamental difference between the pre- and post-1949 works is that in the former Messiaen explored sonority through complex chords, added resonances, and other devices that are explained in the *Technique*. The decisive Cage influence, therefore, is that in *Mode de valeurs* Messiaen defines timbre on a note-by-note basis; gone are all the manufactured chords from the *Technique*. Whether the influence of Cage on Messiaen is direct or mediated through Stravinsky or Debussy, the proximity of Cage's performance of the *Sonatas and Interludes* to Messiaen's working on *Cantéyodjayâ* and *Mode de valeurs* is too coincidental for it not to have been influential.

Given Messiaen's belief that rhythm is primordial, in that it existed long before pitch, there is another strong connection with Cage. In March 1949 before travelling to Europe, Cage published an article entitled 'Forerunners of Modern Music' in which he argued that the only characteristic (pitch, timbre, loudness, and duration) that 'sound' and its opposite, 'silence', have in common is duration. He therefore concluded that music should be structured around duration/rhythm rather than harmony.¹⁰⁰ To that end Cage constructed much of his music of the 1940s from what he called Micro-macrocosmic structures in which the structure/length of a piece is based on a series of numbers, each unit of which in turn is further divided based on the same series. For example, a piece of music containing sixteen units, each with sixteen bars, could be divided into sections of 3 3 4 2 4 units (corresponding to the macrostructure); each unit in

⁹⁸ Mervyn Cooke highlights Debussy's 'Pagodes' from *Estampes*: 'The structure of gamelan music further inspired Debussy to devote greater attention to effects of "layered" polyphony in his piano music, suggesting the resonance of deep Indonesian gongs by the sustained pedalling of low piano tones above which various ostinatos patterns are superimposed.' See Mervyn Cooke, 'New Horizons in the Twentieth Century', in *The Cambridge Companion to the Piano*, ed. by David Rowland (Cambridge: Cambridge University Press, 1998), pp. 192–208 (pp. 194–95). Cooke's chapter also traces the development of the piano as a percussive instrument (see pp. 197–99).

⁹⁹ Hsu, *A Study of the Influence of Liszt, Debussy and Bartók*, p. 67.

¹⁰⁰ John Cage, 'Forerunners of Modern Music', reprinted in *Silence* (Hanover NH: Wesleyan University Press, 1961), pp. 62–66 (p. 63).

turn would then be divided into 3 3 4 2 4 bars (corresponding to the microstructure).¹⁰¹ This puts Cage clearly at odds with Leibowitz—whose negative views on rhythmic constructions have already been highlighted—but in the same aesthetic world as Messiaen, and it is also worth noting that the text of this article was translated into French and published later in 1949 in *Contrepoints*. Of peripheral interest is the fact that Cage studied with Schoenberg in California in 1935 and, although he did not study serial technique with the Master, he developed his own cellular-serial approach where the row is broken into small cells (almost à la Webern), which are repeated and transposed according to certain rules.¹⁰² Although Cage's music underwent frequent and more dramatic changes than Messiaen's music it would be wrong to think of him entirely as an eccentric and someone who continually waged war against (and negated) the musical past. As part of the twentieth century's search for a *lingua franca*, Cage also recognised the two titans of the era, Schoenberg and Stravinsky: 'In the '30s we didn't take Bartók seriously. We took Stravinsky and Schoenberg seriously as the two directions that one could *legitimately* take. I chose Schoenberg, and I think it was right, because toward the end of his life Stravinsky also turned to twelve-tone music.'¹⁰³

3.5 Concluding Comments

The strongest and most constant influence of these three people on Messiaen was that of Boulez. With Messiaen as his teacher, Boulez's appetite was whetted and he forged ahead absorbing all that he could. Through Leibowitz, Boulez was introduced to serialism, and aspects of this approach to composition gradually infiltrated his music; of this, Messiaen was keenly aware. Leibowitz's promulgation of serial music and his critique of Messiaen (as well as the momentum created by the emerging avant-garde) played some part in causing Messiaen to at least consider some re-appraisal of his musical language in 1949. The catalyst was Messiaen's encounter with Cage and his *Sonatas and Interludes*: Messiaen saw the potential for something new.

¹⁰¹ See Pritchett, p. 16.

¹⁰² Pritchett, p. 10.

¹⁰³ Richard Kostelanetz, *Conversing with Cage*, 2nd ed. (New York and London: Routledge, 2003), p. 5 (my emphasis).

In order to appreciate the radical nature of the works composed between 1949 and 1952, it is important to highlight some of the quintessential features of Messiaen's music as codified by the late 1940s. Rather than providing a comprehensive account of Messiaen's 'technique' (which is not the intention of this thesis), the next chapter will focus on elements of Messiaen's language that are further developed in the *Quatre études* and the *Livre d'orgue*. One possible implication of this is that these works do not represent a total negation of Messiaen's past or a 'giving up on all that was dear to him'. This is not to diminish the experimental nature of these works in the context of what came before, but by the end of the thesis I will have shown that they paradoxically look forwards and backwards. It is as if Messiaen, the reluctant avant-gardist, could not completely let go of his past.

CHAPTER FOUR

Characteristics of Messiaen's Language

4.1 Introduction

The previous two chapters highlighted important events that shaped Messiaen as a composer and a man. This chapter will provide a brief overview of some of the composition techniques Messiaen had developed by the mid-1940s. The intention is not to provide a comprehensive account or inventory of Messiaen's musical language/technique at this time as there is much literature on this subject. The emphasis here is to highlight features of Messiaen's musical language that will re-emerge in the works of 1949–52, albeit in a different guise. To that end, this chapter will discuss some of Messiaen's music of this period under the following headings: (i) automatism (pedals); (ii) pre-composition in the Modes of Limited Transposition and their relationship to Serialism; and (iii) rhythm. As *Mode de valeurs* was partly written as a response to the serialists' pre-occupation with pitch, it is important to assess Messiaen's understanding (and criticisms) of traditional serialism. This will be discussed in the final part of the chapter.

Messiaen's compositional language was summed up in his first treatise, the *Technique de mon langage musical*. Many of the musical examples in this come from the *Quatuor pour la fin du Temps*. An examination of the first movement, 'Liturgie de Cristal', provides a useful overview of one of Messiaen's favourite compositional devices: 'pedals'.¹

4.2 *Quatuor pour la fin du Temps*: Automatism

This celebrated piece of chamber music by Messiaen, one of only a handful by the composer, has assumed almost the same mythical status as the premiere of Stravinsky's *Le Sacre du Printemps*. Its very composition was the result of a series of events—from capture and imprisonment by the Germans, to meeting

¹ A 'pedal' in Messiaen's music is the superposition of two or more ideas (rhythms and/or harmonic progressions of differing lengths). He gives numerous examples in Chapter 6 of the *Technique de mon langage musical*. See Olivier Messiaen, *Technique de mon langage musical*, trans. by J. Satterfield, 2 vols (Paris: Leduc 1944/56).

three musicians: Henri Akoka, Etienne Pasquier, and Jean Le Boulaire²—that in turn gave rise to one of the most famous premieres of a piece of music in the twentieth century. This took place in Stalag VIIIA in Görlitz on 15 January 1941. The work showcases many of Messiaen's favourite compositional devices and provides an excellent insight into his rhythmic, harmonic, and melodic writing. The work is also important as it includes Messiaen's earliest attempts at birdsong in his music. The purpose of the analysis below is to focus on a particular compositional technique (pedals), which gives rise to automatism.³

In the first movement of the quartet, 'Liturgie de Cristal', Messiaen explores the idea of automatism by establishing a set of independent rhythmic and harmonic processes that generate a substantial amount of musical material. The precursor to this technique is seen in the isorhythmic motets of medieval music. The piano part in 'Liturgie de Cristal' is made up of a progression of twenty-nine chords (the harmonic pedal)—based on the Modes of Limited Transposition—against seventeen durations (the rhythmic pedal).⁴ It would take $29 \times 17 = 493$ units for the cycle to come full circle because both twenty-nine and seventeen are prime numbers. To express this in another way, it would take twenty-nine statements of the rhythmic pedal and seventeen of the harmonic pedal for the cycle to run its course. Messiaen further complicates things by adding a similar process in the cello so that in fact it would take a very long time (possibly hours) for everything to coincide again.⁵ Understandably, Messiaen

² Rischin, *The Story of the Messiaen Quartet*, p. 2. See also Anthony Pople, *Messiaen: Quatuor pour la fin du Temps* (Cambridge: Cambridge University Press, 1988), pp. 7–11. Rischin's book (pp. 9–20) delves deeply into the circumstances surrounding the work's genesis and proves that the Quartet was actually started at Verdun with the composition of the 'Abîme des oiseaux' for solo clarinet; Messiaen had been in the habit of rising early to hear the birds and wrote this piece. Although this piece remained part of the *Quatuor*, it should be stressed that when he was writing it the idea of composing a quartet had not yet occurred to Messiaen. The fact that it is now known that the 'Abîme des oiseaux' predates the rest of the quartet contradicts Messiaen's assertion that this solo movement was one of the seven to be added after he had composed the 'Intermède' trio in the prisoner of war camp.

³ Automatism will play an important part in the works of 1949–52; this will be discussed in the second half of this thesis.

⁴ See Pople pp. 20–26 for a discussion of the makeup of the chords and rhythms. See also, Allen Forte, 'Messiaen's Chords', in *Olivier Messiaen: Music, Art and Literature*, ed. by Christopher Dingle and Nigel Simeone (Aldershot: Ashgate Publishing, 1997), pp. 99–113. Forte shows that the first eight chords are 'an alternation of 7-20 (the chord with inversions transposed on the same bass note) and 7-35 [...] familiar to everyone in its ordered horizontal form as the diatonic scale.' (p. 100). (Ex. 4.1A reproduces the first six chords of the piece).

⁵ The cello cycles through five pitches over a palindromic rhythmic pedal of fifteen units, with a duration of thirty-three quavers. Pople shows that successive statements of the cello's material coincide with the eighth quaver of the piano's first rhythmic statement, the fifteenth of the next,

does not allow the music to run its course and the movement ends at what appears to be an arbitrary point of his choosing. David Drew's second article in his Messiaen 'trilogy' makes some interesting observations about such music. These comments are all the more telling, given that the article was written in 1955. He says:

Despite the apparently complex formalism, the appeal of this music is essentially decorative. The complexity is thus an illusion. [...] Even those—and I do not count myself among them—who are most favourably disposed towards complexity of this nature must admit that it involves a somewhat alarming proportion of the haphazard and the un-integrated. [...] after an *ostinato* cycle has been set in motion, the music 'composes' itself—in other words the active creative process comes to an end.⁶

The schematic below (Fig. 4.1) illustrates how the 'color and talea' of the piano part would unfold if the process were left to run its course; at the beginning of the thirtieth statement of the rhythmic pedal (or the eighteenth statement of the harmonic pedal), the rhythmic and harmonic pedals will once again coincide. The top row of numbers (Rs = Rhythmic statement) in Fig. 4.1 marks the start of each restatement of the complete rhythmic pedal; the lower row of numbers (Cn = Chord number) gives the chord number (from 1 to 29) from the harmonic pedal that coincides with the start of each rhythmic statement.⁷ So, for example, at the start of the second rhythmic pedal (Rs2), chord eighteen of the harmonic pedal is sounding.

Fig. 4.1 'Liturgie de Cristal': Theoretical Unfolding of the Pedals

Rs	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Cn	1	18	6	23	11	28	16	4	21	9	26	14	2	19	7
Rs	16	17	18	19	20	21	22	23	24	25	26	27	28	29	[30]
Cn	24	12	29	17	5	22	10	27	15	3	20	8	25	13	[1]

then the twenty-second, third, tenth and so on. (Pople, p. 26). However, in bars 2–3 at rehearsal letter F, Messiaen inexplicably elongates one of the quavers by tying it over the barline: 'This causes the cello to leap forward by fifteen places in its cycle of relations with the piano, so if the routine were played out from this point the piano would have to state its rhythm in all a (mere!) fourteen times [...]' (Pople, footnote 26, p. 104). Pople is satisfied that this anomaly is simply an oversight.

⁶ David Drew, 'Messiaen: A Provisional Study (II)', *The Score*, 13 (1955), 59–73 (p. 72).

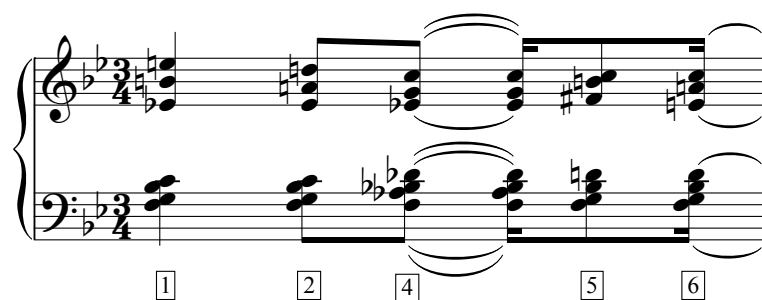
⁷ The [Rs] numbers are only a guide to counting the number of statements of the rhythmic pedal and do not refer to a specific duration within the pedal, whereas the [Cn] numbers indicate the chord number within the harmonic pedal.

The word ‘theoretical’ was used to describe the unfolding because the above schematic does not represent what actually happens. There is an anomaly in the piano part at the beginning of the fourth statement of the harmonic pedal. As the above schematic only shows what chord is sounding at the start of each statement of the rhythmic pedal, it should be noted that the start of the fourth statement of the harmonic pedal happens about half way through the sixth statement of the rhythmic pedal (see bar 6 of rehearsal letter D (page 4, bar 2 of the Durand score)). Messiaen, for no immediately obvious reason, omits the third chord of the harmonic pedal, which creates a most peculiar effect on the synchronisation of the two pedals. Ex. 4.1A shows the first six chords of the piano’s harmonic pedal; Ex. 4.1B reproduces the piano part of the score at D/6 and shows that the third chord is missing.

Ex. 4.1A ‘Liturgie de Cristal’: Chords 1–6



Ex. 4.1B ‘Liturgie de Cristal’: Missing Chord at Rehearsal Letter D, bar 6



Could this omission be an error on Messiaen’s part?⁸ A closer inspection of the chords may reveal why this happened. As can be seen in Ex. 4.1A, the left hand repeats chords: 1=2, 3=4, 5=6 (and 7=8, not shown in the example); the right hand has one repetition: 2=3. With chord 3 involving some form of repetition in

⁸ I have spotted several ‘mistakes’ in Messiaen’s music. For example, the analysis of *Cantéyodjayâ* in Chapter 5 will reveal a single misplaced note/duration.

each hand (L: 3=4 and R: 2=3), it may be that Messiaen simply misread chord 2 as chord 3. But, as this is the only ‘error’ in the piano part, it is a little peculiar. What are the consequences of omitting the third chord? By the start of the seventh statement of the rhythmic pedal, chord 17 rather than 16 is sounding (compare the boxed numbers Figs. 4.1, above, and 4.2, below). It would seem that the pedals are now displaced by one unit but, since both pedals are of different durations, the effect is much more dramatic.

Fig. 4.2 ‘Liturgie de Cristal’: Actual Unfolding of the Pedals

Rs	1	2	3	4	5	6	7	8	9
Cn	1	18	6	23	11	28	17	5	22
Rs	<u>10</u> ⁹	11	12	13	14	15	16	17	[18]
Cn	<u>10</u>	27	15	3	20	8	25	13	[1]

The omission of the chord means that, by the beginning of the eighth statement of the rhythmic pedal, chord 5 is sounding. In the theoretical ‘correct’ unfolding shown in Fig. 4.1, chord 5 is heard at the start of the twentieth statement of the rhythmic pedal (again, see the boxed numbers). The effect of the omission of one chord advances the rhythmic cycle by twelve statements, thereby dramatically reducing the length of time it will take for the rhythmic and harmonic cycles to coincide. As the second schematic shows (Fig. 4.2), it will now only take seventeen statements (rather than twenty-nine) of the rhythmic pedal for the two cycles to coincide again. The mathematics is straightforward: seventeen statements of the seventeen rhythmic units gives a total duration of 289 units. This is just one short of 290, which is ten times the number of units in the harmonic pedal. It is also interesting to note that the number now required for both pedals to coincide is seventeen, the same number of units in the rhythmic pedal. This may be coincidental but it is tempting to conjecture if the omission was deliberate on Messiaen’s part. (Some ten years after composing this piece Messiaen wrote a virtuosic toccata for organ, ‘Les Yeux dans les Roues’ (the

⁹ The movement ends on the fourteenth rhythmic unit of the tenth statement of the rhythm pedal; chord 23 of the harmonic pedal is sounding at this point.

sixth movement of the *Livre d'Orgue*), where the omission of notes plays a crucial role in shaping the overall pitch content of the manual lines).¹⁰

Given the circumstances surrounding this piece's composition—in fairly deplorable conditions in a prisoner of war camp—Messiaen could be forgiven for accidentally leaving out one of the chords; but, the omission of this one chord has all sorts of intriguing mathematical connotations: a 'charm of impossibilities' if you will. The chord omission gives rise to two important numbers: twelve and seventeen. The number twelve is the difference in units between the two pedals, as well as the number of rhythmic statements advanced. The number seventeen is: (i) the 'new' resulting number of rhythmic statements needed for the cycles to coincide; (ii) the number of rhythmic units; (iii) the chord number sounding at the start of the next rhythmic statement. It could be posited that Messiaen was aware of these intricacies and deliberately omitted the chord. The omission of any number of chords (other than one) would destroy these multiple numerical relationships.¹¹

This 'missing chord' is not discussed in any of the literature on the work, although (as mentioned earlier) Anthony Pople briefly refers to a slight alteration in the cello part;¹² he fails to highlight the more interesting activity in the piano part. In the final analysis this irregularity is probably irrelevant since the ethos of the piece remains unchanged: we are merely dipping in and out of something that feels as if it could last for eternity. While the movement has a beginning and an end in practical terms, in theory it evokes the concept of Time having no beginning or end. The crucial feature is that once Messiaen establishes the pedals, the music effectively 'writes' itself (automatism). Such pedals are present in many of Messiaen's compositions in the 1940s (they will be seen again in the discussion of the *Turangalila-Symphonie* in Section 4.4) and this form of automatism will feature prominently in the intversion techniques developed in the works of 1949 to 1952. The omission of this chord (if it is an error) highlights a problem with music that is completely automatic: the composer is unlikely to be aware of what should sound at a particular time—the process determines that.

¹⁰ This will be discussed in detail in Chapter 8. The analysis of 'Les Yeux' will also reveal some potential 'mistakes' by Messiaen.

¹¹ I have done a detailed analysis of the effects of the omission of various numbers of chords and none of the findings result in anything as interesting as this situation.

¹² Pople, p. 26.

In other words, a mistake may not be noticed because the composer is no longer in control of the constituent parts. Without detailed tables or matrices to guide, in 'Liturgie de Cristal' the probability of chord 4 coinciding with the sixteenth rhythmic unit is as likely as it coinciding with the seventeenth. If Messiaen had spotted the omission, the rest of the piano part would have to have been rewritten. Perhaps he thought that this would be too much work or that there was no point in rewriting the piano part because the detail matters less than the overall effect. However, one could be pernicky and suggest that from the moment the chord is left out the rest of the piece does not sound as it should.

4.3 The Modes of Limited Transposition and Serialism

In the serial works of the Second Viennese School, pre-composition takes place in constructing a row to function as the nucleus of the piece. Schoenberg and Webern developed highly individual approaches to tone-row construction: Schoenberg favoured the technique of hexachordal combinatoriality, whereby the row is structured in such a way that the pitches of the first hexachord are to be found in the second hexachord of another row, though not necessarily in the same order. Therefore, in practical terms, by combining the first hexachords (or the second hexachords) of the two rows, a 'theoretical' new row is created. Webern, on the other hand, had a penchant for creating rows based on intervallic symmetry, the result of which frequently generated twenty-four rather than forty-eight rows. This will be discussed in more detail presently.

By the time Schoenberg and Webern were writing their mature works, Messiaen had already formulated his Modes of Limited Transposition. In total, Messiaen devised seven modes. To highlight but a few of these, Mode 1 is the whole tone scale, which the composer uses on only a few occasions, and Mode 2 (as mentioned earlier) is a form of the octatonic scale, which proliferates Messiaen's music of the 1930s and 1940s. Mode 7 (see Ex. 4.2)¹³ is the most chromatic of all the modes, having ten of the possible twelve notes of the chromatic scale. This mode is not very common in Messiaen's music, though he cites its occurrence in the fourth movement of *L'Ascension* when discussing the Modes of Limited Transposition in *Technique de mon langage musical*.

¹³ Messiaen, *Technique*, II, p. 54.

Ex. 4.2 Mode 7



Each mode is made up of small symmetrical units, with ‘the last note of each group always being common with the first of the following group’.¹⁴ In addition, each mode (with the exception of Mode 3) divides the octave at the augmented fourth (see Ex. 4.3, which reproduces Mode 2).¹⁵ There are only three possible transpositions of Mode 2 (Messiaen calls the original ‘Transposition 1’) since the transposition beginning on E-flat duplicates the pitches of the original.

Ex. 4.3 Mode 2

Mode 2: Transposition 1

Mode 2: Transposition 2

Mode 2: Transposition 3

Mode 2: Transposition 4 = Transposition 1

The Modes of Limited Transposition are the basic building blocks of Messiaen’s harmonic and melodic language. Allen Forte says that Messiaen ‘had available the total resources of the mode conceived as an *unordered* pitch-class set,’¹⁶ but a mode can be defined without all pitches having to be stated. There is a substantial body of literature, including Messiaen’s own writings, that provides detailed analyses of Messiaen’s rich harmonic language in the 1930s and 1940s;

¹⁴ Ibid., p. 58.

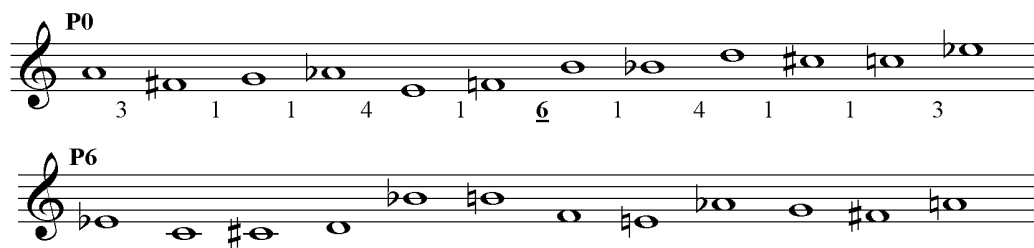
¹⁵ Ibid., p. 50.

¹⁶ Forte, ‘Messiaen’s Chords’, p. 94.

it is not necessary to provide a comprehensive overview in the context of this thesis.

An unpublished dissertation by Thomas Muncy draws parallels between the symmetrical units in each of Messiaen's modes and Webern's approach to row structure. Before discussing this, it is worth noting another of his observations. Muncy reproduces the prime row of Webern's Symphony Op.21 (Ex. 4.4) and observes that this row is non-retrogradable;¹⁷ specifically, the interval class series reads the same in both directions, with the augmented fourth (interval class 6) as the point of symmetry (P0 is annotated with interval class values in Ex. 4.4). An examination of Ex. 4.4 reveals that the retrograde of P6 is a duplication of P0, which illustrates how the total number of rows available to Webern is twenty-four and not forty-eight.¹⁸

Ex. 4.4 Webern Symphony Op.21, 12-tone Row



Of course, Messiaen's penchant for non-retrogradable material is more readily seen in his approach to rhythm, but he does comment on the relation between non-retrogradable rhythms and the modes of limited transposition:

... these modes cannot be transposed beyond a certain number of transpositions without falling again into the same notes, enharmonically speaking; likewise, these rhythms cannot be read in a retrograde sense without one's finding again exactly the same order of values as in the right sense. These modes cannot be transposed because they are - without polytonality - in the modal atmosphere of several keys at once and contain in themselves small transpositions; these rhythms cannot be retrograded because they contain in themselves small retrogradations. These modes are divisible into symmetrical groups; these rhythms, also, with this difference: the symmetry of the rhythmic groups is a retrograde symmetry. Finally, the last note of each group of these modes is always *common* with the

¹⁷ Thomas R. Muncy, 'Messiaen's Influence on Post-War Serialism', unpublished doctoral thesis (Ann Arbor, Michigan: University Microfilms International, 1984), p. 18.

¹⁸ It is worth noting that an augmented fourth divides Webern's twelve-tone row in two; however, he generally favoured dividing the row into three tetrachords to create interesting overlaps and canons between rows.

first of the following group; and the groups of these rhythms frame a central value *common* to each group. The analogy is now complete.¹⁹

It is such an explanation that permits Muncy's observations. Indeed, it is possible to go further and hypothesise that Webern's approach to row construction, which results in twenty-four rather than forty-eight possible rows, is very closely related to what Messiaen describes as the 'charm of impossibilities', which 'reside(s) particularly in certain mathematical impossibilities of the modal and rhythmic domains [...] the rhythms realizing in the horizontal direction (retrogradation) what the modes realize in the vertical direction (transposition).'²⁰ Muncy compares Messiaen's Mode 2 with the prime row of Webern's Concerto for Nine Instruments, Op.24. For the purposes of illustration, he rearranges Messiaen's mode by repeating the last note of each group at the start of the next group, which results in a pitch series of twelve notes. Muncy then divides Webern's row into four groups of three notes to aid comparison [Ex. 4.5].

Ex. 4.5 Comparison of Mode 2 and a Webern 12-tone Row

Webern Concerto Op.24 PO [Muncy's Arrangement]

Messiaen Mode 2 [Muncy's Arrangement]

There are striking similarities; each three-note unit outlines a minor third (m3) and, within each row, each of the three-note cells has the same intervallic structure: Messiaen consistently uses a minor second (m2) followed by a major second (M2), while Webern alternates a minor second (m2) with a major third (M3). Muncy is not trying to prove that Webern influenced Messiaen; rather he is simply showing a common approach to pitch organisation: 'The similarities in

¹⁹ Messiaen, *Technique*, I, p. 21.

²⁰ *Ibid.*, p. 13.

construction between Messiaen's modes and Webern's tone-rows show that some of the principles underlying serial language were not that far removed from Messiaen's own musical language.'²¹

Interesting though Muncy's comparisons are, it would have been prudent to note some crucial aesthetic differences. First, the fundamental difference between Messiaen's Mode 2 and Webern's twelve-tone row is that in the former Messiaen is still working within the broad parameters of French harmony, strongly influenced by Debussy, in which the gravitational power of a 'tonic' is omnipresent, whereas in the latter no one pitch reigns supreme in a language where pitch hierarchy has been abolished.²² Second, there is no question of Messiaen treating his pitch material serially by forbidding the repetition of a note until the remainder of the mode has been stated. Finally, the process of pre-composition in Webern's rows is far removed from that in Messiaen's modes: for Webern, each 'original' row is just that—written for a specific composition; Messiaen's modes, on the other hand, are simply a revision or an enlargement of the basic major and minor scales of tonality, and a particular mode (for example Mode 2) is to be found in many of his compositions. Another fundamental difference is that in Messiaen's modes there is no compulsion to state all of the notes.²³

In the Anniversary Issue of *Music Analysis* devoted to Messiaen, Wai-Ling Cheong provides a detailed assessment of Messiaen's modes, particularly in their deployment in parallel chords. She goes on to suggest that when 'viewed vertically, the constituent pcs [pitch class sets] of these parallel chord series are also subjected to systematic reorderings.'²⁴ In other words, Cheong argues that the interversions and permutations associated with *Île de feu* 2 (for example) can also be seen in use in the Modes of Limited Transposition. '[...] the device of

²¹ Muncy, p. 16. Although Muncy does not discuss influence *per se*, it is worth reiterating that Messiaen was aware of Tchaikovsky and Scriabin's use of a scale made up of alternate tones and semitones (later codified as the octatonic scale). It may seem curious to choose Mode 2, since it is not Messiaen's invention, but Muncy also goes on to compare Mode 3 with the tone row from Webern's String Quartet Op.28; therefore, for the purposes of the present discussion the comparison with Mode 2 illustrates the point.

²² This assessment contradicts Messiaen's view that no notes in the modes have any gravitational pull. See Section 4.5.

²³ See Section 4.5, which gives details of Messiaen's views on serialism and how he views his Modes of Limited Transposition.

²⁴ Wai-Ling Cheong, 'Messiaen's Triadic Colouration: Modes as Intversion', *Music Analysis*, 21 no. 1 (2002), 53–84 (p. 70).

parallel chord series adds to Messiaen's repertory of modes a permutation of notes on the one hand and chords on the other.²⁵ Cheong provides an alternative reading of Modes 2 to 7 in Table 4 on page 73 of her article; Messiaen's intervention techniques will be discussed in detail in Chapter 7.

The above argument shows possible links between Messiaen's modes and the creation of the prime row in a serial piece. It is not suggesting that the modes are influenced by serialism. To further refute any hint of influence, the crucial requirement of 'Awareness', as highlighted by Hermerén and other writers on influence, is in doubt.²⁶ It is unclear whether Messiaen was familiar with the music of Schoenberg or Webern in the 1930s. One of the first references to Messiaen's knowledge of or familiarity with serialism appears in accounts of his capture during World War 2 (May 1940), where he was found to be carrying a copy of Berg's *Lyric Suite*.²⁷ We do know that Messiaen discussed some of the works of the Second Viennese School in his private class of analysis and composition at the house of Guy Bernard-Delapierre from 1943, but it seems that his first encounter with Webern did not occur until 1947, where he heard René Leibowitz conduct the Op.21 Symphony at a festival in Paris.²⁸ Despite these tenuous links to Webern, Messiaen had at least some interest in serial music, even if it was less than enthusiastic as the following comments might suggest. In conversation with Antoine Goléa, Messiaen refers to his first public comments on the Second Viennese School's bias towards pitch: in his harmony class at the end of the 1943–44 academic year he spoke out 'in a loud voice' against their unilateral interest in pitch: 'And I had already pronounced these words: "series of timbres", "series of dynamics", and above all, "series of durations".'²⁹ Yvonne Loriod, Messiaen's second wife, also recalls some of his hostility towards serialism:

At the time they were written (*Quatre études*) Messiaen was giving a course at Darmstadt and he was doing a lot of research. He was surrounded by young people like Boulez and Stockhausen, all of whom were very hot-headed. Well,

²⁵ Ibid., p. 72.

²⁶ See Section 2.2.

²⁷ Malcom Hayes, 'Instrumental, Orchestral and Choral Works to 1948', in *The Messiaen Companion*, ed. by Peter Hill, pp. 157–200 (p. 186).

²⁸ This was mentioned in Chapter 1. See also Section 4.5 for information on Messiaen's knowledge of Webern's Op.28 Variations.

²⁹ 'Et j'avais déjà prononcé les mots : « série de timbres », « série d'intensités », et surtout « série de durées »', Goléa, *Rencontres*, p. 247.

Messiaen found that he had had enough of serial systems: he said that people were too concerned with pitch and not enough with rhythm. That is how he came to have the idea of a *mode de valeurs et d'intensités* and this in turn gave birth to the idea of *Cantéyodjayâ*.³⁰

We will return to serialism and Messiaen's views on the subject towards the end of this chapter. Messiaen's belief that rhythm is primordial and that it existed before melody is borne out in the works of his so-called 'Experimental Period', a description first coined by Robert Sherlaw Johnson.³¹ Therefore, before examining in more detail Messiaen's views on serialism, a brief overview of his approach to rhythm in the works of the 1940s is necessary.³²

4.4 Messiaen's 'Chromatic' Rhythm

The *Turangalila-Symphonie* is Messiaen's *tour de force* of the 1940s. A key feature of the work is the superimposition of numerous pedals to generate vast passages of music. And, in addition to the continued deployment of *deçî-tâlas*, Messiaen further developed his research into chromatic rhythm. This was to be an important precursor to the formal serialisation of rhythm in the works of Boulez, Stockhausen and others in the 1950s; the chromatic rhythms developed by Messiaen in the 1940s also provide the source for his further experimentation in *Mode de valeurs* in 1949. It is worth stressing once again that, although Webern did not serialise rhythm in his Op.27 Variations, the fact that rhythms are aligned to pitch, which is serialised, indicates that Webern was en route to total organisation in his music. He was not alone in this quest: Stuckenschmidt, for example, notes that in the Inn scene (Act III, after the murder of Maria) of Berg's *Wozzeck* 'we meet for the first time the idea of serial techniques in the area of rhythm.' The scene is based on the polka rhythm previously played in the timpani; 'But Berg does not use it as a simple rhythmical ostinato. Instead, he shows it magnified, diminished, and with changing accents. He manipulates it

³⁰ Peter Hill, 'An Interview with Yvonne Loriod', in *The Messiaen Companion*, pp. 283–303 (p. 297).

³¹ Robert Sherlaw Johnson, *Messiaen* (London: Dent, 1975), pp. 101–15.

³² It is beyond the scope and remit of this thesis to provide a comprehensive overview of Messiaen's rhythmic language. For example, the 'personnages rythmiques' (developed from Stravinsky's *Le Sacre*) play an important role in the *Turangalila-Symphonie*. This technique will reappear in the *Livre d'orgue* so, to avoid repetition, I will defer discussion of it until the analysis in Section 8.2.

exactly as one manipulates a tone-row.³³ Peterson also sees Berg foreshadowing some of Messiaen's rhythmic techniques. He singles out Berg's use of 'mathematically related metronome markings to achieve cohesion [...] and "constructive rhythm" (Hauptrhythmus), i.e., purely rhythmic patterns with which he achieves rhythmic unity.'³⁴

At its most basic level, chromatic rhythms are generated by building on individual rhythmic durations (for example, a semiquaver) and progressively adding (or subtracting) units. In 'Regard de l'Onction terrible', (movement XVIII of the *Vingt regards sur l'Enfant-Jésus*) Messiaen simultaneously deploys two lines: the note values in the right hand get progressively longer (deceleration) while those in the left hand get progressively shorter (acceleration). The common building block is the semiquaver: the right hand starts with a chord that lasts one semiquaver and with each new chord/attack the duration is lengthened by one semiquaver (this gives a chromatic series of one to sixteen semiquavers). The opposite takes place in the left hand: it starts with a note lasting sixteen semiquavers (equivalent to a semibreve) and with each subsequent attack the duration is shortened by one semiquaver (see Ex. 4.6).³⁵ The pitch material is also totally chromatic: Each chord (cumulatively made up of an augmented fourth and a perfect fourth (0, 1, 6)) chromatically ascends or descends to the next one. Messiaen tells Claude Samuel that this is 'an extremely rare effect that hardly exists except in Bali'.³⁶

³³ Stuckenschmidt, 'Contemporary Techniques', p. 7.

³⁴ Larry Wayne Peterson, 'Messiaen and Rhythm: Theory and Practice', unpublished doctoral dissertation, University of North Carolina at Chapel Hill, 1973 (University Microfilms, Ann Arbor, Michigan), pp. 34–35. Exemplars of this last point are seen in *Wozzeck* (1921), the Chamber Concerto (1923–25), the Violin Concerto (1935), and *Lulu* (1934–37).

³⁵ This all takes place at the beginning of the movement. Messiaen then reverses the process at the end of the piece using the same material: the hands diverge from the middle of the piano but this time the right hand accelerates and the left hand decelerates.

³⁶ Samuel, p. 116.

Ex. 4.6 'Regard de l'Onction Terrible', bb. 1–5: Chromatic Rhythm

Messiaen's use of chromatic rhythm is always linear rather than exponential but that does not mean that the end result is straightforward. As chromatic rhythm plays such a significant role in the works from 1949 to 1952, it is important to show its further development in the 1940s. The seventh movement of the *Turangalila-Symphonie* ('Turangalila II') contains a solo percussion sextet whose rhythms are determined by chromatic durations.³⁷ Here Messiaen combines the earlier technique of rhythmic/harmonic pedals (automatism: discussed in the analysis of 'Liturgie de Cristal' above) with his new interest in chromatic rhythm. As with 'Regard de l'Onction terrible', Messiaen works with sixteen rhythmic units, ranging from one to sixteen semiquavers (the total duration of such a series is 136 semiquavers, or 17 minims—a prime number). However, Messiaen now spreads all the individual durations across three instruments to give each instrument a unique rhythm; by repeating these rhythms over and over, rhythmic pedals are produced:

³⁷ See Johnson, pp. 92–93 for how this chromatic series is reinterpreted in 'Turangalila III'. Johnson also notes that this percussive episode returns at the end of the movement ('Turangalila II') superimposed over the main theme (p. 93). This section in no way purports to be a detailed analysis of any aspect of the *Turangalila-Symphonie*.

A Triangle:	15 13 3 4 (repeated)	[35 semiquavers]
B Woodblock:	12 14 1 2 7 8 16 (repeated)	[60 semiquavers]
C Turkish cymbal	5 6 9 11 10 (repeated)	[41 semiquavers]

The significance of the total duration of each rhythmic idea (in brackets above) is that the lowest common multiple of these three numbers is 17220, which means that hundreds of statements would be required before the cycle/pedal would return to where it started: specifically it would take 492 statements of the triangle rhythm, 287 statements of the woodblock rhythm, and 420 statements of the Turkish cymbal. The link with ‘Liturgie de Cristal’ is clear but the aural effect is more arresting; this is perhaps the most abstract section of all of Messiaen’s music to date.³⁸ To complete the sextet Messiaen deploys three more percussion instruments, each of which states one of the above rhythms in retrograde:

RA Maracas [retrograde of triangle]:	4 3 13 15
RC Chinese cymbal [retrograde of Turkish cymbal]:	10 11 9 6 5
RB Bass drum [retrograde of woodblock]:	16 8 7 2 1 14 12

The letters in Ex. 4.7 (on the next page) represent each of the instruments above; square brackets indicate the start of each instrument’s second statement of its rhythm; numbers above each note are durations in semiquavers. There is one other subtle thing at work in this section: each duration is assigned a fixed dynamic. Although there are only three unique dynamic markings, this does represent one of Messiaen’s earliest attempts at integrating all the parameters of music: durations 1, 2, 7, 8 and 14 are always *ff*; durations 5, 6, 9, 10 and 11 are always *f*; durations 3, 4, 12, 13, 15 and 16 are always *mf*.

To conclude this brief overview of Messiaen’s approach to rhythm, one final excerpt from the *Turangalila-Symphonie* will be discussed. The second section of the first movement (‘Introduction’) seems to contain every rhythmic device Messiaen had developed by this time, and all at the one time. Robert Sherlaw Johnson ranks this section as ‘one of the most complex examples of the superimposition of rhythmic patterns in Messiaen’s music’. He also sees a strong link with Stravinsky’s *Le Sacre* because of the ‘constantly repetitive motivic

³⁸ Without going into a detailed programmatic account of this work, ‘Turangalila II’ occurs after a movement essentially preoccupied by love (‘Jardin du sommeil d’amour’). The stark sonorities of ‘Turangalila II’ are apt as the movement ‘expresses pain and death’, Johnson (p. 92).

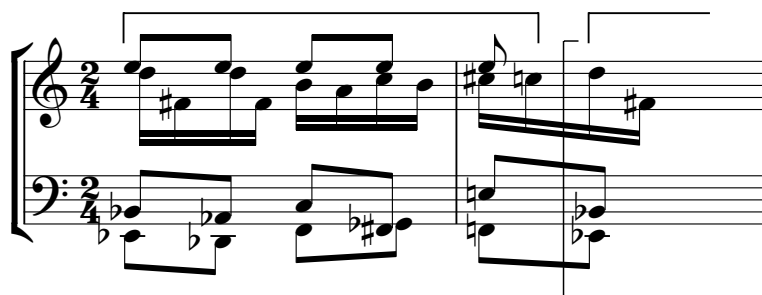
ideas and expanding and contracting rhythmic cells'.³⁹ Johnson's analysis is succinct so it is worth producing a little more of the detail here.

Ex. 4.7 'Turangalila II': Percussion Sextet (chromatic rhythms and rhythmic pedals)

The musical score for 'Turangalila II': Percussion Sextet is presented in three systems. The first system contains six staves, each with a 2/4 time signature and a key signature of one sharp (F#). The staves are labeled A, B, C, RA, RC, and RB. The music features a variety of rhythmic patterns, including eighth and sixteenth notes, and rests. Dynamics such as *mf* (mezzo-forte), *f* (forte), and *ff* (fortissimo) are indicated. Measures are numbered throughout the score. The second system continues the rhythmic patterns across six staves, with dynamics like *mf* and *ff* still present. The third system shows further rhythmic development, with dynamics including *mf* and *f*. The notation includes various rhythmic markings and articulations typical of a percussion score.

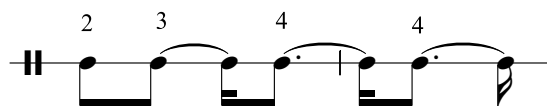
³⁹ Johnson, p. 84.

Ex. 4.9 Five-quaver Ostinato



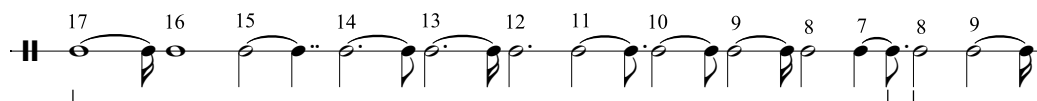
The remaining woodwind instruments state a short decelerating motif of four units (to fourteen unique chords), the opening of which is reproduced in Ex. 4.10.⁴²

Ex. 4.10 Decelerating Motif in Woodwind



The remaining percussion instruments create two more rhythmic effects. First, a Chinese cymbal incessantly beats out a chromatic rhythm, which initially accelerates from a duration of seventeen to seven semiquavers and then decelerates its way back up to seventeen again (see Ex. 4.11).

Ex. 4.11 Chromatic Rhythm (deceleration/acceleration) in the Chinese cymbal



Second, the snare drum beats a non-retrogradable rhythm, which is augmented three times by the cumulative addition of identical rhythmic cells at either end of the rhythm, thus maintaining the non-retrogradable feature. [On the third augmentation, Messiaen also adds an additional rhythm to the centre.] Another feature is that the number of units in the original and augmented rhythms is a prime number. Finally, the overall duration of the original rhythm is seventeen

⁴² Johnson identifies this as 'Lackskmîça' (p. 85).

semiquavers, which links it to the process at work on the Chinese cymbal. Ex. 4.12 is arranged to show the central unit and the augmentations.⁴³

Ex. 4.12 Augmentation of Non-retrogradable Rhythm in the Snare Drum

The diagram illustrates the augmentation of a non-retrogradable rhythm in a snare drum. It consists of four horizontal staves, each representing a different level of augmentation. The original rhythm (11 units) is shown as a sequence of notes: a quarter note, an eighth note, a sixteenth note, a thirty-second note, a quarter note, an eighth note, a sixteenth note, a thirty-second note, a quarter note, an eighth note, and a sixteenth note. The first augmentation (Aug. 1) repeats the original rhythm and then adds the original unit at the end, resulting in 13 units. The second augmentation (Aug. 2) repeats the original rhythm and then adds the original unit at the end, resulting in 19 units. The third augmentation (Aug. 3) repeats the original rhythm and then adds the original unit at the end, resulting in 29 units. The notation uses various note values to represent the rhythm, with brackets indicating the original unit and its placement within the augmented sequence.

Larry Peterson suggests that even in the 1930s Messiaen treated rhythm independently from melody and harmony. He, like Johnson, sees the *Turangalila-Symphonie* as the rhythmic climax of Messiaen's first period of composition: Peterson uses the term 'panisorhythm' to describe the 'simultaneous use of isorhythms in many parts'.⁴⁴

Arguably, the two most important aspects of Messiaen's rhythmic endeavours in the 1940s are chromatic rhythm and automatism. In the examples discussed above, it has been shown that these techniques have the potential to create vast sections of music, which essentially 'compose' themselves once the processes are set in motion. These techniques are further refined in the experimental works but they give rise to much shorter and tighter musical structures. Just as the Modes of Limited Transposition repeat after a small number of transpositions, so too do Messiaen's rhythmic structures in the works of 1949 to 1952.

4.5 Messiaen on 'Serialism'

From Loriod's recollection, recalled earlier, and the countless interviews given by Messiaen throughout his career, a haphazard (and at times, inconsistent)

⁴³ Johnson provides an alternative schematic of these rhythms (p. 85) but his example lacks clarity.

⁴⁴ Peterson, pp. 46–47.

picture of Messiaen's views on serialism emerges. Now, with the publication of the final volume of the *Traité de rythme, de couleur, et d'ornithologie* in 2002, these views can now be more accurately collated and summarised. A footnote at the bottom of page 44 of Volume 7 indicates that this section was first drafted between 1952 and 1955.⁴⁵ This is somewhat encouraging for the purposes of this thesis because the drafting of this section occurred shortly after Messiaen composed the *Quatre études* and the *Livre d'orgue* and, it could be argued, gives a valuable insight into his thinking during this turbulent period in Occidental music. However, it is worth interjecting a minor caveat: the footnote indicates that it was drafted between 1952 and 1955 but there is no way of knowing how much it changed over the next forty years. Indeed one of the difficulties encountered when reading and trying to translate the *Traité* is the inconsistent writing style: at times, highly poetic; at times, rather childish; and at yet other times almost incomprehensible due to poor grammar and numerous spelling mistakes. As will be seen below and in the analytical chapters, Messiaen frequently leaves the reader frustrated by spending an inordinate amount of time giving endless examples of a technique or process when, after the theory is explained and demonstrated, no more need be said. The seven-volume, 3500-page work is as noteworthy for what it does not say than for what it does. A case in point is the way Messiaen glosses over the examples he chooses when discussing the serial works of the Second Viennese School.

Volume Seven's discussion of serialism opens with a blunt, terse statement, which sets the scene for the negativity to follow: 'Starting with the negative aspect [...]'.⁴⁶ Messiaen reminds his reader of how, as early as 1942 after analysing Berg's *Lyric Suite* in his harmony class, he suggested creating a series with all the elements of music in mind. He also acknowledges that his *étude*—*Mode de valeurs*—gave rise to much imitation and that many composers created super-series in this style.⁴⁷ Messiaen proceeds to mention one of his favourite mathematical observations: the number of ways of arranging twelve numbers is 479,001,600. He further says that, because traditional serialism uses

⁴⁵ Olivier Messiaen, *Traité de rythme de couleur, et d'ornithologie*, 7 vols, VII, (Paris: Alphonse Leduc, 1994–2002), p. 44.

⁴⁶ 'Commençons par l'aspect négatif', *Traité*, VII, p. 44.

⁴⁷ *Traité*, VII, p. 44. It is at this point that a footnote indicates this part of the *Traité* was drafted between 1952 and 1955.

only a tiny fraction of these possibilities, the interest lies in how the series is treated. In Messiaen's discussion of the standard four forms of the twelve-tone row in traditional serialism, two things are interesting: first, Messiaen chooses the tone row from Schoenberg's Op.31 *Variations for Orchestra* and, second, he applies René Leibowitz's codifying terminology. Schoenberg's significance will be commented on shortly and the very fact that Messiaen mentions Leibowitz proves that in the early 1950s (and probably even earlier than that) he was acutely aware of Leibowitz's work.

It is worth noting Messiaen's terms and how he aligns them with Leibowitz's descriptions of the various transformations of a twelve-tone row. Messiaen labels the normal reading of the row as 'Le mouvement droit'; Leibowitz calls this the 'originale'. What we would term as the 'inversion' of the row, Messiaen uses 'Le mouvement contraire'; Leibowitz labels this as 'renversement'. Messiaen labels the retrograde of a row as 'Le mouvement rétrograde'; Leibowitz uses 'récurrence'. Finally, Messiaen describes the retrograde of an inversion as 'Le rétrogradation du contraire'; Leibowitz calls this 'récurrence du renversement'.

According to Messiaen, the inversion and the retrograde of the inversion 'are just melodic fantasies, usable only in the melody'.⁴⁸ Messiaen doesn't adequately clarify what he means by this. The negative connotation is amplified in his next sentence where he declares that the retrograde of the row is the first of the interversions or permutations and that these can be 'applied to **everything**, like all types of interversions'.⁴⁹ This rather weakly structured argument comes across as a polemic on Messiaen's part as he inexorably moves to criticise Schoenberg and defend his own technical approaches. The rest of Messiaen's observations can be summarised as follows: (i) register is irrelevant; (ii) whether unfolding melodically or harmonically, the series must be stated in its entirety—Messiaen finds this absurd: 'A strict serial (approach) cannot support the

⁴⁸ '[...] ne sont que des fantaisies mélodiques, utilisables seulement dans la mélodie.' *Traité*, VII, p. 44.

⁴⁹ 'Par contre, le mouvement rétrograde est la première des interventions (*sic*) ou permutations, et s'applique à **tout**, comme toutes espèces d'interventions.' *Traité*, VII, p. 45. Messiaen's use of the word 'interventions' is probably a misprint and should read 'interversions'. Messiaen's development of permutation techniques (interversions) is discussed in detail in Section 7.2.1.

unfolding of 11 notes: he is worried as long as he has not heard the 12th.⁵⁰ (iii) octaves and unisons are forbidden, mainly to avoid giving the impression of tonality; (iv) each unfolding presents a new rhythmic and harmonic aspect—Messiaen uses the phrase ‘**variation perpétuelle**’ (borrowed from Leibowitz: emphasis in the *Traité*); (v) taking the above into account ‘**the series acts each time on melody, on counterpoint and on harmony**’ (emphasis in the *Traité*).⁵¹

Messiaen goes on to give five examples of different uses of a twelve-tone series. It is interesting that three of these examples are drawn from the music of Webern, with the other two taken from works by Schoenberg and Berg. The second example from Webern’s output is from the Op.27 Piano Variations. It would be very interesting to know exactly when Messiaen became acquainted with this piece. The work was composed in 1936 and published by Universal in 1937. The Piano Variations were performed in Paris in 1938, but it is not known if Messiaen was in attendance. It took some ten years for Webern’s Variations Op.27 to have its first German performance; Peter Stadlen gave the premiere in Darmstadt in 1947.⁵² (Messiaen did not attend Darmstadt until 1949). It is difficult to ascertain how accessible the score was in the 1940s and when Messiaen first saw it.⁵³ However, a recent discovery proves conclusively that Messiaen knew the Op.27 Variations before he composed the *Quatre études*. Messiaen quotes a passage from the end of the third movement of the Variations (from bar 56) in *Île de feu 1* (page 2, bar 4); this was discovered by Betsy Jolas and was confirmed by Messiaen.⁵⁴ Messiaen’s discussion of the Webern Op.27 Variations in the *Traité* is very brief: he quotes part of the third movement and highlights the overlapping of two rows.⁵⁵

The parallels between the second movement of Webern’s *Variations* and *Mode de valeurs* are revelatory. A key feature of Webern’s second movement is

⁵⁰ ‘Un sériel rigide ne peut supporter un déroulement de 11 sons: il est malade tant qu’il n’a pas entendu le 12^e.’ *Traité*, VII, p. 45.

⁵¹ ‘[...] **la série agit à la fois sur la mélodie, sur le contrepoint, et sur l’harmonie**’. *Traité*, VII, p. 46.

⁵² David Osmond-Smith, ‘New Beginnings: the international avant-garde’, in *The Cambridge History of Twentieth Century Music*, ed. by Nicholas Cook and Anthony Pople (Cambridge: Cambridge University Press, 2004), pp. 336–353 (p. 340).

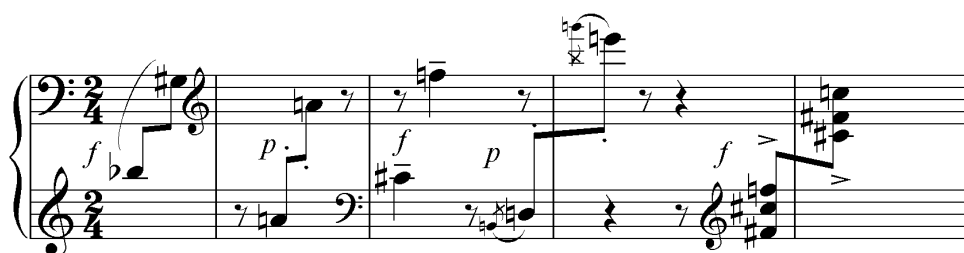
⁵³ According to Paul Griffiths, one of Messiaen’s students (Karel Goeyvaerts) made a study of the work in 1949, whilst still in Paris. See Section 5.2.

⁵⁴ This information was supplied to the author by Christopher Dingle; Betsy Jolas told Julian Anderson who, in turn, told Dingle.

⁵⁵ See the earlier section (4.3), which compares Messiaen’s Modes with the construction of a typical Webern twelve-tone row.

the creation of motifs that are fixed (in terms of dynamics and articulation) for the movement's short duration. Ironically, the *Variations* are more 'organised' than *Mode de valeurs*: Webern's total organisation takes place in rows that are 'inversionally related' and 'canonically disposed'; rhythmically, the canon is a constant quaver 'forming a succession of figures made up of two eighth notes.'⁵⁶ Ex. 4.13 reproduces the opening bars of the second movement.

Ex. 4.13 Webern: *Variationen* Op.27, mvt. 2, bb. 1–4



It is clear from Messiaen's conversations with Claude Samuel that he favoured Webern over Schoenberg. He also saw that Boulez was Webern's successor: 'Boulez came from Webern and, as a serialist composer, has greatly surpassed him. Ultimately, I am not sure that Schoenberg was serial, and I'm even less certain about Berg. Webern was undoubtedly the true serialist composer, but serialism inhibited him, preventing him from practicing large forms.'⁵⁷ Steuermann, to whom the work was dedicated, said:

Strange things have happened in serial music. Schoenberg was, I feel, the true genius. His disciples, Berg and Webern, were merely ingenious. But now, of course, it is Webern that has influenced a whole generation of composers. They are interested by his bloop, plink, and they think they are in the atonal stream.⁵⁸

With the revelation that Messiaen quoted part of the Webern *Variations* in *Île de feu I*, the crucial requirement of 'Awareness/Contact' is fulfilled. There is

⁵⁶ For a detailed discussion see Peter Westergaard, 'Webern and "Total Organization": An Analysis of the Second Movement of Piano Variations, Op.27, *Perspectives of New Music*, 1 no. 2 (1963), 107–20 (pp. 107–08).

⁵⁷ Samuel, p. 183. See also another quotation from Messiaen's conversations with Samuel in Section 3.3.

⁵⁸ Kenneth Gartner, 'The Expansion of Pianism since 1945', unpublished doctoral dissertation (Ann Arbor, Michigan: University Microfilms International, 1979), p. 100, citing 'Steuermann's Variations on Schoenberg', *New York Times*, CXII: 38466 (1969).

therefore direct evidence of Webern's influence on Messiaen; this influence is also mediated through other composers, particularly Boulez.⁵⁹

As mentioned earlier, it is interesting that Messiaen discussed Schoenberg in this section of the *Traité*. On the surface it would seem logical and appropriate to at least acknowledge one of the pioneers of serial music, but it appears that Messiaen was in some way influenced by the emerging army of Schoenberg critics. Messiaen's overview of serialism was written very shortly after Boulez wrote the highly polemical *Schoenberg est mort*. Leibowitz, who had heralded the genius of Schoenberg and re-invigorated interest in his music and that of his followers, was gradually receding to the margins of obscurity in Parisian culture and, almost mirroring Leibowitz's demise, Webern was gradually usurping Schoenberg as the latest beacon for the emerging avant-garde. All these things considered, when one examines the excerpt extracted from Schoenberg's output in Messiaen's treatise, it becomes clear that he acquiesced with this shift. The extract in question is the opening chordal sequence of Schoenberg's *Klavierstücke* Op.33a (reproduced in Ex. 4.14).

Ex. 4.14 Schoenberg: *Klavierstücke* Op.33a, Opening



Messiaen briefly summarises how the row is divided into three tetrachords and stated in its original and retrograde forms in bars 1 and 2 respectively (O I and RC VI, to use Messiaen's terms and numbering). He then goes on to criticise the resulting chords:

Unfortunately, this passage gives us too many classified sonorities: the second chord is the second inversion of the seventh and diminished fifth; the fourth

⁵⁹ This mediation is facilitated through the concept of reciprocal influences first mentioned in Section 2.3.1 and discussed in more detail in Section 3.2.

chord is a leading sixth with an added augmented fourth; the fifth chord is also a leading sixth.⁶⁰

It is difficult to determine exactly what Messiaen means in his description of these chords. To use more traditional analytical descriptions, the second chord is the first inversion of a half diminished seventh; the most obvious interpretation of the fifth chord is that it is a (dominant) seventh chord in second inversion. Regardless of how these chords are interpreted, the issue is the inherent implication that if a chord or amalgam of pitches can in some way be classified, there is something wrong with it. Earlier, Messiaen briefly mentioned the serialists' avoidance of octaves—which, in fact, was not always strictly adhered to—so as to prevent any semblance of tonality. It could be argued that the weakness in Messiaen's argument is that inevitably, with some manipulation and analytical rearrangement, a multitude of rich, chromatic (and describable) chords are to be found in serial and atonal music. The point that must surely be stressed is that such chords do not have the same structural (or voice-leading) implications as they would have in tonal music. Messiaen's (and my) labelling of them in this manner is totally irrelevant to a discussion of non-tonal music.

In his final example (from Berg's *Lyric Suite*), Messiaen highlights the unequal division of the twelve-tone row into three, four and five notes and how these are used as melodic pedals (this is the only excerpt for which Messiaen does not provide a music example). He concludes, 'It seems to me that the pedals superimpose a sort of tonality by being repeated, and are contrary to the serial spirit'.⁶¹ It is questionable whether Messiaen has truly addressed what he means by the 'serial spirit'; highlighting (for the most part) negative aspects merely shows Messiaen's hostility towards the music.

Messiaen's overview of traditional serialism is far from comprehensive. The positive aspects of his 'critique' can be reduced to two points: (i) the retrograde of the row is favoured because it is identical to one of Messiaen's interventions when a permutation is performed; (ii) Webern is the only composer to come out favourably (which is significant given the aesthetic climate of the

⁶⁰ 'Malheureusement, ce passage nous offre trop de sonorités classées : le 2^e accord est le 2^e renversement de la septième et quinte diminuée, le 4^e accord est une sixte sensible avec quarte augmentée ajoutée, le 5^e accord est aussi une sixte sensible.' *Traité*, VII, p. 50.

⁶¹ 'Il me semble que les pédales superposées une sorte de tonalité par la force de la répétition, et sont contraires à l'esprit sériel.' *Traité*, VII, p. 50.

early 1950s), and Schoenberg and Berg are criticised for writing music that allows tonality to rear its head again. Immediately following his discussion on serialism, Messiaen returns briefly to the Modes of Limited Transposition. He is at pains to stress that ‘The Modes of limited transposition have neither tonic nor dominant. They have no beginning or end. They are not a place, like major tonality. They are not an order, like the series. They are of **colours**, and harmonic **colours**.’⁶² Messiaen then claims to have rarely used the whole-tone scale (Mode 1). Cross-referencing this comment with the *Technique* explains why. As Debussy and Dukas have already used it ‘there is nothing more to add’.⁶³ Messiaen then says that he created the rest of the modes, but (unlike in *Technique* (discussed earlier)) he does not make any reference to Mode 2 having a precursor in some of the music of Stravinsky, Ravel and Rimsky-Korsakov.

4.6 Concluding Comments

Messiaen’s awareness and understanding of serialism increased during the 1940s to the point that by the time he came to compose the *Livre d’orgue* in 1951–52 the works of Schoenberg and Webern (and Berg) were widely disseminated. The predominantly negative tone of his discussion of serialism in the *Traité* and his assessment that Webern was the true serial composer (in other writings and conversations) provides interesting information from the point of view of assessing Messiaen’s response to the revival of Viennese serialism. As will be seen in chapters 8 and 9 (on the *Livre d’orgue*), Messiaen devised alternative methods for writing with all twelve tones. It will also be seen that when Messiaen does use traditional serial techniques he ‘smothers’ them with extremely complex rhythmic devices. Messiaen’s first response to the serialists’ predilection for pitch was a honing of the chromatic rhythms developed in the 1940s. He would refine this technique in the highly influential *Quatre études de rythme*. In the weeks that followed the performance of the *Sonatas and Interludes*, Messiaen went to Darmstadt and then to Tanglewood; there he started

⁶² ‘Les Modes à transpositions limitées n’ont ni tonique, ni dominante. Ils n’ont pas d’initiale, ils n’ont pas de finale. Ils ne sont pas un lieu, comme la tonalité majeure. Ils ne sont pas un ordre, comme la série. Ils sont des **couleurs**, et des **couleurs** harmoniques.’ *Traité*, VII, p. 51.

⁶³ *Technique*, I, p. 59. Messiaen does direct the reader to one instance of its use in combination with other modes. See Example 43 in *Technique* II and the corresponding text in I, p. 23.

work on what he thought were just a couple of innocuous piano pieces. How wrong that would turn out to be.

CHAPTER FIVE

Quatre études de rythme: Composition, Reception and Precursor (Cantéyodjayâ)

Messiaen went through a period of intense self-questioning, possibly as a result of the explorations carried out by some of his pupils (of whom I [Boulez] was one) who had made a more-or-less radical break with his personal predilections. Messiaen seems to be questioning everything that had been most personal, and probably most dear to him, in his previous music.¹

Mode de valeurs: ‘Four years after attracting the sobriquet “Atomic Bomb of contemporary music” Messiaen had achieved the musical equivalent of splitting the atom.’²

5.1 Introduction

Having summarised the key elements of Messiaen’s musical language in the 1940s, the next two chapters will focus on the influential studies that make up the *Quatre études de rythme*. Of the four pieces, *Mode de valeurs et d’intensités* and *Île de feu 2* are the most receptive for suggesting a response to writing with twelve tones. This in no way diminishes the musical or aesthetic merit of *Neumes rythmiques* or *Île de feu 1* but, as will be seen, these works are more firmly rooted in the musical language of the 1940s and on the surface appear less radical than their counterparts. Loriod’s reminiscence of *Mode de valeurs* being written as a response to what was happening around Messiaen at this time (mentioned in Chapter 4) provided the initial impetus for investigating the concept of influence: a response to something implies a reaction to something and, by implication, the influence of external forces. In particular, Chapter 4 argued that during the mid- to late-1940s, Messiaen’s acquaintance or interaction with John Cage, Pierre Boulez and René Leibowitz may have been an important catalyst in making Messiaen question all that had been most dear to him (see the quotation at the top of this page). An analysis of the *Quatre études* will reveal the effect such influences had on Messiaen; but, conversely and crucially, the analysis will also illustrate how Messiaen asserts his individualism and builds strongly on the compositional techniques he developed throughout the 1940s (some of which were discussed in Chapter 4). In this respect, the musical

¹ Boulez, ‘The Utopian Years’, pp. 412–3.

² Dingle, *Life of Messiaen*, p. 124. The ‘Atomic Bomb of Contemporary Music’ was coined by Virgil Thompson and is referenced in Chapter 2.

language of these works may in fact represent a far less radical departure from his quintessential style than is generally asserted. In addition, the detailed analyses of the *Livre d'orgue* in chapters 8 and 9 will show how some of the pieces build on the techniques developed in the *Quatre études*. Before analysing *Mode de valeurs* in detail (the first of the *Quatre études* to be written), it is important to place the work in a historical context by clarifying the chronology of events that led to its composition. This will be followed by a brief analysis of the 'Modéré' section of the piano piece *Cantélyodjayâ*, which paved the way for the more elaborate *Mode de valeurs et d'intensités*.

5.2 Composition and Reception

The pieces that make up the *Quatre études de rythme* are dated as follows according to the Second Edition of *The New Grove Dictionary*: *Mode de valeurs et d'intensités* (1949); *Neumes rythmiques* (1949); *Île de feu 1* (1950); *Île de feu 2* (1950).³ *Mode de valeurs* has the inscription 'Darmstadt 1949' on the cover. Messiaen attended the *Internationale Ferienkurse für Neue Musik* as a guest of the city in 1949 but, despite the inscription referred to above, it has been suggested that he did not complete the composition until the following winter.⁴ This raises interesting questions about the exact chronology of events surrounding its composition and the composition of *Cantélyodjayâ*, which has a strong connection with it. For a long time, the date of composition of *Cantélyodjayâ* was incorrectly recorded as 'Tanglewood, 1948'.⁵ The *Grove Dictionary* (Second Edition) has now corrected this to 1949, which is compatible with the dates Messiaen attended the Tanglewood Music Center (then called the Berkshire Music Center) to teach composition alongside Aaron Copland.⁶ The courses at Tanglewood took place from 4 July to 14 August,⁷ and Messiaen set sail from France on 27 June. As discussed in Chapter 3, an important event took

³ For the sake of brevity, *Mode de valeurs et d'intensités* will be referred to as *Mode de valeurs* from here on; *Quatre études* will also suffice.

⁴ Harry Halbreich, *Olivier Messiaen* (Fayard / Fondation: SACEM, 1980), p. 39.

⁵ André Boucourechliev, 'Messiaen', in *The New Grove Dictionary of Music and Musicians*, ed. by S. Sadie (London: Macmillan, 1980), XII, pp. 204–10 (p. 207).

⁶ Hill and Simeone also make the plausible suggestion that given how much was happening in Messiaen's life at this time, including his wife's illness, it is understandable that he got some dates confused. See Hill and Simeone, *Messiaen*, pp. 179–80.

⁷ I should like to thank Bridget Carr, the archivist at Tanglewood, and Chris Fox for this valuable information. The length of Messiaen's trip to Darmstadt was very short—only three days according to Hill and Simeone, (p. 180).

place on 17 June in Paris at which Messiaen was in attendance: a performance of Cage's *Sonatas and Interludes* for prepared piano, which was prefaced by a substantial introduction by Pierre Boulez. It seems reasonable to assume that Messiaen visited Darmstadt fully aware of the emerging new generation of composers and possibly made some preparatory sketches for *Mode de valeurs*. He then travelled to Tanglewood where he composed *Cantélyodjayâ*, completing it on 15 August.⁸ In *The Life of Messiaen*, Christopher Dingle, drawing on Hill and Simeone, suggests that Messiaen simply got the dates mixed up: eventually the Darmstadt Festival would move to September, but in 1949 it took place from 19 June to 10 July. The following statement by Dingle seems to imply that Messiaen had worked out all the details of *Mode de valeurs* and then applied them to a short section of *Cantélyodjayâ*:

The importance of this is that, rather than *Cantélyodjayâ* being a burst of creativity containing the kernel of the idea developed in *Mode de valeurs*, the 'rhythmic study' was exactly that, a study exploring a new technique, which was then applied within a broader compositional form in *Cantélyodjayâ*.⁹

I do wonder if this is putting the cart before the horse. Any argument must take account of the fact that Messiaen was only in Darmstadt for a few days and it is unlikely that he did little more than do some preliminary sketches. Why would he 'tone down' the modes/divisions in *Cantélyodjayâ* a few weeks later? It seems more likely that the 'Moderé' section of *Cantélyodjayâ* was a trial run at composing in this manner and, the very fact that it is not as explosive as *Mode de valeurs*, would indicate that it was written first. One final observation is apposite: despite the initial confusion surrounding what was written where and when in this period, and the subsequent clarifications in recent years, the published score of *Cantélyodjayâ* still has the year 1948 on the cover page.¹⁰

Cantélyodjayâ, in essence, is typical of Messiaen's musical style in the 1940s, but it takes the concept of juxtaposition of ideas to new levels. It also contains a short experimental passage (already mentioned) that would form the basis for *Mode de valeurs*. Whilst in Tanglewood, Messiaen also composed *Neumes rythmiques*, which has the inscription 'Tanglewood 1949' on its cover.

⁸ Hill and Simeone, p. 190. It would be several years before the work was published (1953) or heard in public (February 1954).

⁹ Dingle, p. 125.

¹⁰ Universal Edition UE 12 127: *Cantélyodjayâ* für Klavier (1948).

The remaining two *études*—*Île de feu 1 & 2*—were written in Paris in 1950 and dedicated to Papua, New Guinea.¹¹

The *Quatre études* received their premiere in the rather unusual location of Tunis in November 1950.¹² Messiaen then went on to record the pieces, and the music critic Antoine Goléa brought the disks to Darmstadt. It is worth clarifying exactly when this occurred. Goléa in his book, *Rencontres avec Olivier Messiaen*, claims that he brought the recordings to Darmstadt in 1950.¹³ However, several other people claim that this did not happen until 1951, and there is ample evidence to substantiate this: namely the testimonies and biographical details of the Belgian composer, Karel Goeyvaerts, and the German composer, Karlheinz Stockhausen.¹⁴ Most conclusively, Peter Hill states that Messiaen recorded the piece on 30 May 1951.¹⁵ Stockhausen, Goeyvaerts and Goléa listened to *Mode de valeurs* many times and were immediately impressed—Stockhausen being particularly struck by its sonority and pointillist texture. What adds further weight to the assertion that this occurred in 1951 is the appearance of Goeyvaerts' Sonata for Two Pianos. In this sonata, which was

¹¹ Peter Hill, 'Piano Music II', in *The Messiaen Companion*, pp. 307–51 (p. 320). See also Christopher Dingle's 'List of Works and Discography' in the same book, (pp. 536–65). Gartner claims they were written in New Guinea but there is no evidence that Messiaen was there at this time. See Gartner, 'The Expansion of Pianism since 1945', p. 123. Dingle, in a conversation with Peter Hill, suggests that the inspiration of Papua New Guinea was instilled in Messiaen by Pierre Tallec, 'a former Governor of the French colony and friend of Messiaen, who attended the class at the Paris Conservatoire'. (See Dingle, *The Life of Messiaen*, pp. 126–27). Hill cites sleeve notes to a recording whereby Messiaen said he started work on *Mode de valeurs* a week after finishing *Cantélyodjayâ*. (See *The Messiaen Companion*, p. 308). As has been discussed here, and substantiated by other scholars, Messiaen was in Darmstadt before Tanglewood in 1949, given the dates of both festivals. It seems highly unlikely that Messiaen wrote very much of *Mode de valeurs* in Darmstadt, and this surely reaffirms Halbreich's suggestion, cited earlier, that the work was not completed until December 1949 back in Paris.

¹² Peter Hill, 'Messiaen recorded: *The Quatre Études de rythme*' in *Olivier Messiaen: Music, Art and Literature*, ed. by Christopher Dingle and Nigel Simoene (Aldershot: Ashgate Publishing Ltd., 2007), pp. 79–90 (p. 81). It was at this point that Messiaen came up with the title for the set, insisting that the pieces should not be played separately. (See Gartner, p. 123). The accepted order of performance is *Île de feu 1*, *Mode de valeurs et d'intensités*, *Neumes rythmiques*, and *Île de feu 2*. The fact that the premiere took place outside of Europe possibly explains why most of Messiaen's students and contemporaries did not hear the work until the following summer.

¹³ Goléa, *Rencontres avec Messiaen*, pp. 246–47. Hill comments that Messiaen recorded the pieces for Columbia in 1951, which further refutes any possibility that Goléa had a recording in 1950. (See *The Messiaen Companion*, p. 322.)

¹⁴ Goeyvaerts, 'Paris-Darmstadt 1947–1956', pp. 44–45; See also Michael Kurtz, *Stockhausen: A Biography*, trans. by R. Toop (London and Boston: Faber and Faber, 1988/92), p. 36; and Paul Griffiths, *Olivier Messiaen and the Music of Time* (London: Faber and Faber, 1985), p. 152.

¹⁵ Hill, 'Messiaen recorded', p. 79.

written with no knowledge of Messiaen's *Mode de valeurs*,¹⁶ Goeyvaerts attempted to integrate all musical parameters, that is pitch, duration, dynamic and timbre (attack), within a serial structure using his 'synthetic number' principle.¹⁷ According to Paul Griffiths, Goeyvaerts studied with Messiaen in 1947/48; then in 1949/50 (whilst still in Paris) he made a study of Webern's Op.27 Variations. The implication is that Goeyvaerts's Sonata was composed after his encounter with Webern's Variations. Griffiths says that there is therefore a possibility that Goeyvaerts may have been more responsible for 'jolting Messiaen towards the *Mode de valeurs*' than Cage or Boulez.¹⁸ Speaking of the Sonata in his autobiography, Goeyvaerts says:

It suddenly seemed so obvious, so unavoidable, that I could not imagine that I was the only one to have reached this conclusion. My brief contact with Cage made me suspect that the development of musical language in the United States had gone at least as far.¹⁹

Indeed this is true; the innovations in Milton Babbitt's *Composition for Four Instruments* (1947-48)²⁰ and, of course, Messiaen's *Mode de valeurs* come to mind. In Darmstadt, Stockhausen and Goeyvaerts performed the second movement of Goeyvaerts's Sonata in Adorno's class in 1951—Adorno had stepped in at the last moment to replace Schoenberg, who was gravely ill—but the performance was not a success: the work was ridiculed by fellow students and Adorno had grave philosophical reservations, reportedly asking 'Why did

¹⁶ Goeyvaerts had left Paris (and Messiaen's class) over a year earlier and claims that Messiaen never once referred to *Mode de valeurs*. See Goeyvaerts, 'Paris-Darmstadt', p. 45. Since *Mode de valeurs* was not completed until December 1949, and even if Messiaen had talked about it, Goeyvaerts would not have been around to hear about it.

¹⁷ It is beyond the scope of this thesis to discuss in detail the 'synthetic number principle'. However, for further information on this see Mark Delaere, 'Karel Goeyvaerts: A Belgian Pioneer of Serial, Electronic and Minimal Music', *Tempo*, 195 (January 1995), 2–5; and Hermann Sabbe, 'Goeyvaerts and the Beginnings of 'Punctual' Serialism and Electronic Music', *Revue belge de musicologie*, 48 (1994), 55–94, a translation from the book *Het Muzikale Serialisme als Techniek en als Denkmethode* (Ghent, 1977), pp. 88–132.

¹⁸ Paul Griffiths, *Modern Music*, p. 32. Griffiths puts this comment in parentheses, which indicates that the supposition is just that, a supposition. As noted in Section 4.5, Messiaen was familiar with Webern's Op.27 Variations.

¹⁹ Goeyvaerts, 'Paris-Darmstadt', p. 44.

²⁰ Gartner, p. 112. See also Peyser, p. 91. In Babbitt's *Three Compositions for Piano* (1948) timbre was not serialised because he was working with one instrument. Both Gartner and Peyser note, though, that the preceding work (*Composition for Four Instruments*) did serialise timbre. Babbitt did not necessarily view himself as having arrived first at the point of total serialism, since his approach differed greatly from that taken in Europe.

you compose that for *two pianos*?’²¹ Stockhausen then competently analysed the piece for the class, but the analysis was ‘coolly received by Adorno’.²² Stockhausen was clearly impressed with Goeyvaerts’s work and learned that Goeyvaerts had been a pupil of Messiaen some years earlier. He therefore resolved, with a little coaxing from Goeyvaerts, to travel to Paris to study with Messiaen and commenced his studies in January 1952. Such a move provides further evidence of Messiaen’s position as a much sought-after teacher, and Stockhausen was but one of many students who flocked to his classes.²³ This evidence in particular conclusively proves that *Mode de valeurs* was not heard in Darmstadt until 1951.

Messiaen’s piece has been cited as the catalyst for Boulez’s *Structures Ia* and Stockhausen’s *Kreuzspiel*. Richard Toop discusses this in detail in a 1974 article where he attempts to show how a sonata by Karel Goeyvaerts (referred to above) provides the ‘missing link’ from *Mode de valeurs* to *Kreuzspiel*, and how a sonata by Michel Fano provides the ‘missing link’ from *Mode de valeurs* to *Structures I*.²⁴ In light of this, it is easy to see how *Mode de valeurs* could be regarded as the seminal work in integral serialism, though this is something Messiaen was reluctant to accept:

I was very annoyed over the absolutely excessive importance given to a short work of mine, (only three pages long) [*sic*], *Mode de valeurs et d'intensités*, because it supposedly gave rise to the serial explosion in the area of attacks, durations, intensities, timbres – in short, all of its musical parameters. Perhaps this piece was prophetic and historically important, but musically it’s next to nothing.²⁵

Messiaen’s views on *Mode de valeurs* show his awareness of the historical significance of the piece but also his distaste for it musically. However, it is clear that Messiaen saw an extra-musical purpose for such an approach in some of his later works. According to Peter Hill, Messiaen ‘was no longer interested in the technique *per se* but only in its descriptive effect – in ‘La Chouette hulotte’

²¹ Kurtz, pp. 35–36. See also Richard Toop, ‘Messiaen/Goeyvaerts, Fano/Stockhausen, Boulez’, *Perspectives of New Music*, 13 no.1 (1974), 141–69 (p. 142), citing H. L. Metzger, ‘Just Who is Growing Old?’, *Die Riehe*, no. 4.

²² Kurtz, p. 35.

²³ See Boivin, *La Classe de Messiaen*, for a detailed discussion of Messiaen’s teaching career and a comprehensive list of students who attended his classes. Michael Kurtz’s *Stockhausen*, cited by Dingle (pp. 128–29), notes that Messiaen was aware that that Stockhausen was ‘unhappy’ in his class; for Stockhausen, the issue was that he did not receive direct instruction in composition in Messiaen’s class but, despite this, he rated Messiaen very highly as a teacher.

²⁴ Toop, ‘Messiaen/Goeyvaerts’, 141–69.

²⁵ Samuel, *Music and Color*, p. 47.

evoking darkness and terror, as it also does in the introduction to the Stigmata scene (Scene 7) from *Saint Françoise d'Assise*.²⁶ Hill also recalls Messiaen saying that the significance of the *études* 'had been exaggerated out of proportion to their musical worth.'²⁶ Getting a premiere for a new musical work is much easier than getting a second or several subsequent performances. According to Hill, Messiaen gave at least fifteen performances of the *études* within a five-year period; so, 'it is hardly surprising that they became so influential'.²⁷ It would be wrong to conclude from this that Messiaen was averse to innovative compositional techniques; this is evidenced by his hearty approval of Goeyvaerts's Sonata, performed in Paris in late 1951 in front of a competition jury that included Messiaen. According to Goeyvaerts, upon hearing the piece Messiaen asked for an analysis of the work, which Goeyvaerts duly supplied; Messiaen also asked for a copy of the score with the implication, according to Goeyvaerts, that he and Yvonne Loriod would perform the work.²⁸ Unfortunately nothing came of this; although, since neither Goeyvaerts's name nor his sonata feature prominently in any of the documented conversations with Messiaen (this event is not referred to by Messiaen in any of his writings or interviews) it should be stressed that Goeyvaerts's comments remain unsubstantiated.

To precisely define the moment of the birth of Total Serialism is fraught with difficulties given the number of people experimenting in the field—for example Goeyvaerts in Europe, and Babbitt in the United States—but Messiaen's short *étude*, *Mode de valeurs*, had a profound influence. As mentioned above, its precursor is the piano piece *Cantéyodjayâ*,²⁹ which contains, within its mosaic-like structure, a section labelled, 'mode de durées, de hauteurs et d'intensités': this 'Modéré' section is perhaps the most abstract thing

²⁶ Hill, 'Messiaen recorded', pp. 80–81.

²⁷ Ibid., p. 82.

²⁸ Goeyvaerts, 'Paris-Darmstadt', pp. 46–47.

²⁹ This thesis focuses on specific aspects of Messiaen's musical language of the period, but for an informative and more detailed discussion of the full piece see, Hill, 'Piano Music II', in *The Messiaen Companion*; Michèle Reverdy, *L'oeuvre pour Piano d'Olivier Messiaen* (Paris: Leduc, 1978), pp. 60–65; Griffiths, *Olivier Messiaen and the Music of Time*, pp. 144–49; and Gareth Healey, 'Messiaen's *Cantéyodjayâ*: A Missing Link', *The Musical Times*, 148 no. 1898 (Spring, 2007), 59–72. This article is expanded in Chapter 10 of Healey, *Messiaen's Musical Techniques: The Composer's View and Beyond* (Farnham: Ashgate, 2013).

that Messiaen had yet composed, rivalling the percussion sextet from *Turangalîla*, discussed in Chapter 4.

5.3 *Cantélyodjayâ*

In its prefiguring of *Mode de valeurs*, this forward-looking and innovative section [‘Modéré’] is balanced by ‘references to earlier works’,³⁰ which together create a mosaic- and collage-like structure. Robert Sherlaw Johnson, in commenting on the wealth of material that makes up *Cantélyodjayâ*, suggests that it ‘displays the collage-structure developed to its ultimate extreme’.³¹ Dingle describes the work as another ‘stream of consciousness’ and ‘[...] whilst containing some of the same *joie de vivre* as *Turangalîla*, far from being a continuation, *Cantélyodjayâ* is more of an exorcism of Messiaen’s musical past.’³² David Drew sees the work as a successor to Debussy’s *Jeux*, both of which are composed of ‘brief episodes with *ritornelli*’.³³

Before examining in detail the ‘Modéré’ section, one other very short section must be mentioned as it represents Messiaen’s first ever engagement with traditional serialism. Gareth Healey’s 2007 article in *The Musical Times*³⁴ reassesses the work’s technical attributes by examining Messiaen’s analyses in the *Traité* of some of his other works and then applying them to *Cantélyodjayâ*.³⁵ The article opens with the following line, ‘*Cantélyodjayâ*, Messiaen’s 12-minute single-movement piano piece of 1948’, and includes a quotation from Messiaen in the booklet notes to Accord CD 564 791-2 (2001), in which Messiaen talks about writing the piece between 15 July and 15 August in 1948. Healey does not challenge the dates at all. Much of the rest of the article deals with ‘quotation’ or the reappearance of material from earlier works in *Cantélyodjayâ*. Of particular interest here is Healey’s brief discussion of serial procedures at work. He quickly glosses over the ‘so-called’ notion of Total Serialism seen in the ‘Modéré’ section (this will be discussed in detail below) before revealing Messiaen’s first ever strict Schoenbergian treatment of a twelve-tone row on page 19, bars 6 to 10

³⁰ Griffiths, *Olivier Messiaen*, p. 145.

³¹ Johnson, *Messiaen*, p. 102.

³² Dingle, *Life of Messiaen*, p. 123.

³³ Drew, ‘Modern French Music’, p. 234.

³⁴ See the earlier footnote for details of the article.

³⁵ Messiaen does not discuss *Cantélyodjayâ* in any great detail in the *Traité*, although he reproduces the score of the ‘Modéré’ section after his analysis of *Mode de valeurs*.

of the score: ‘The importance of the section lies in Messiaen’s use of strict serialism and, notwithstanding his comments to Samuel, is a possible reference to Schoenberg.’³⁶ It would have been useful had Healey produced a score analysis of these bars but upon investigation it is a straightforward task to see the deployment of P-0, I-0, R-1 and P-6 as indicated in Healey’s Figure 2. Healey suggests a possible connection between these bars (in particular ‘the initial use of pitch classes E and F’) and Schoenberg’s *Suite for Piano Op.25*, which also makes use of the rows P-0 and P-6.³⁷ Healey also acknowledges the important role of René Leibowitz in his publication of *Introduction à la musique de douze sons* in Paris (1949). It is clear from the discussions in Chapter 3 that Messiaen was aware of Leibowitz and his teachings on Schoenberg and the Second Viennese School. What Healey fails to point out is that these four bars of *Cantéyodjayâ* are not a contained section in themselves. In fact, they conclude the first part of the ‘Third Couplet’, which then continues with a *Vif* toccata. So, with references to past works, traditional serialism, and the looking forward to total serialism,³⁸ Healey’s description of the work as a ‘missing link’ is apposite.

Two other sections also look to the future and the past. First, on page 19 Messiaen introduces a permutation (interversion) of four pitches: there are six unique orderings of the four notes before Messiaen states the original one last time. It should be stressed that these are random arrangements and are not as methodical as the interventions to come in subsequent works (to be discussed in the following chapters). Second, beginning on page 13 Messiaen composes a chromatic scale of durations with the demisemiquaver as the unit. The hands begin at the extremes of the piano and gradually make their way to the centre, getting louder all the time. The right hand has values ranging from one to twenty-three demisemiquavers; the left hand begins with a value of twenty-three demisemiquavers and ends with one demisemiquaver. This technique is simply a longer version of techniques seen in (for example) the *Vingt regards* and *Turangalîla*. The use of a prime number is, of course, neither insignificant nor unexpected.

³⁶ Healey, p. 69.

³⁷ Ibid..

³⁸ The term ‘Total Serialism’ is of course not entirely accurate. This will become clearer as the thesis progresses.

It is worth reiterating that the work was not published until 1953 and only received its first performance (by Loriod) in February 1954 in the second of the new *Domaine musical* concerts. Again, according to Hill, Messiaen did not highly rate the piece³⁹ but its inclusion in such a prestigious concert is testament to Messiaen's standing in the contemporary music community.

From an aural (and visual) perspective, the most abstract and forward-looking section of *Cantéyodjayâ* is the 'Modéré' section (pp. 8–10/5). This is based on a mode of twenty-four pitches (three rows/divisions of eight), each of which is fixed in register, duration and dynamic [see Ex. 5.1].⁴⁰ Messiaen uses the demisemiquaver as the basic rhythmic unit of the first division, which results in durations of one demisemiquaver to one crotchet; the second and third divisions have a semiquaver and quaver as their units applied in the same way. Many of the notes have similar dynamic markings because Messiaen only employs five distinct gradations but, unlike in *Mode de valeurs*, there are no articulation markings/attacks and he uses a much narrower range of the piano—just over four octaves.

Ex. 5.1 *Cantéyodjayâ*: Divisions⁴¹ Arranged According to Duration



A cursory glance at Ex. 5.1 reveals that the pitch content of each division does not descend in a straight line; this is particularly notable in the second and third

³⁹ Hill, 'Messiaen recorded', p. 81.

⁴⁰ In Paul Griffiths's article on Messiaen in the *Grove Dictionary* (also in the online version, *Oxford Music Online*), he inadvertently suggests that each mode consists of twelve units; see 'Messiaen, Olivier', in *The Grove Dictionary of Music and Musicians*, 2nd edn, ed. by Sadie, 16 (2001), 491–504 (p. 498).

⁴¹ This is Messiaen's term. The term 'Division' will be used when discussing the pre-compositional material; for discussions of the actual music the term 'Line' will be used.

divisions. This means that duration is not specifically determined by a note's register. In *Mode de valeurs* Messiaen applies duration to a pitch based on the acoustic properties of the piano: therefore, the higher the pitch within a division, the shorter its duration.⁴² This does not happen in *Cantélyodjayâ* and it is therefore safe to assume that the level of pre-composition in *Cantélyodjayâ* is less rigorous than that in *Mode de valeurs*. In addition, the subtitle to the 'Modéré' section of *Cantélyodjayâ* begins with the phrase 'mode de durées', which possibly indicates that Messiaen was more interested in working with duration than pitch—perhaps another reaction to the serialists' predilection for pitch, which he had criticised earlier in the decade. Ex. 5.2 reproduces the opening four bars of the piece.⁴³

Ex. 5.2 *Cantélyodjayâ*: Opening of 'Modéré' Section

Division 1 unfolds in its entirety (from 1 to 8) in the opening four bars. Messiaen allows the durational characteristics of the other divisions to stand out immediately (a median duration in division 2, and the longest duration in division 3). This approach also characterises the beginning of *Mode de valeurs*. Occurrences of a complete unfolding of a division from its shortest to its longest duration are rare but are highlighted in bold in Fig. 5.1, which tabulates the pitch content of the 'Modéré' section.

⁴² Strictly speaking, in *Mode de valeurs* this correspondence between a pitch's register and its duration only applies within each division. If the pitch content of the three divisions were amalgamated into one descending line, minor anomalies would arise.

⁴³ It should be noted that Messiaen does not write the piece in one 'notional' time signature, as is seen in *Mode de valeurs* (2/4). In *Cantélyodjayâ* bars vary in length from three semiquavers to five quavers. There is no musical significance to this, however, as the barlines in both pieces are merely visual aids.

Fig. 5.1 *Cantéyodjayâ*: Pitch Analysis of ‘Modéré’ Section⁴⁴

Bar	Division/Line 1	Division/Line 2	Division/Line 3
1	1-2-3-4	(rq-rq)-6-	8-
2	5-6-	(6)-	(8)-
3	(6)-7-	(6)- 1-2-	(8)-
4	(7)-8-	(2)-3-4-	(8)-<u>7-</u>
5	5-6-1-	(4)-5-	(<u>7</u>)-
6	6-3-4-	(5)-6-	(<u>7</u>)-
7	(4)-2-1-4-	(6)-7-	1-2-
8	6-7-	(7)-	(2)-5-
9	(7)-8-1-4-	8-	(5)-
10	(4)-2-3-	1-2-	6-
11	(3)-1-4-2-8-	3-4-3-	(6)-
12	2-4-	(3)-1-	(6)-3-
13	8-	5-	(3)-
14	2-1- 8/5? -7-	(5)-3-8-	1-2-
15	(7)-5-	(8)-	4-
16	8-	(8)-2-	(4)-
17	7-6-	1-2-3-	1-5-
18	(6)-5-	(3)-4-	(5)-
19	(5)-4-	(4)-7-	(5)-
20	3-2-1-	(7)-	(5)-2-
21	6-	(7)-	(2)-3-
22	1-3-6-2-	3-5-	(3)- <u>7-</u>
23	8-	(5)-8-	(<u>7</u>)-
24	4-1-7-	(8)-	(7)-
25	3-6-	2-7-	(7)-
26	(6)-1-6-	(7)-	4-
27	8-	(7)-6-	(4)-
28	(8)-2-4-5-	(6)-1-2-	1-2-
29	(5)-3-2-8-	(2)-3-4-	3-
30	(8)-6-3-2-1-6-	(4)-7-	4-
31	(6)-5-6-1-4	(7)-5-4-	5-
32	5-1-7-8-	3-1-2- 7-	6-
33	(8)-1-7-	(7)-8-	(6)-<u>7-</u>
34	(7)-1-2-4-	(8)-	(7)-
35	1-3-7-	(8)-	(<u>7</u>)-
36	(7)-5-	1-2-4-	(7)-
37	4-1-2-3-	(4)-3-	8-
38	5-6 (1/2 length)*	5-6 (1/6 length)*	(8) (11/16 length)*

⁴⁴ For the purpose of analysis, the pitches of each division are numbered 1 to 8 following the duration/order of the preface divisions. Bold typeface indicates some form of an ordered unfolding of a division. Underlined numbers represent unique pitch classes, which will be discussed below. * The final notes of each division all fall short of their prescribed duration.

The analysis reveals that each division unfolds only once from its shortest to its longest notes (1 to 8): division 1 from bars 1 to 4; division 2 from bars 3 to 9; and division 3 from bar 28 to the end of the excerpt. It should be stressed that there is no requirement for any division to unfold in this order (the music is not serial), but there is also one instance of a retrograde reading, which occurs in line 1 from bar 16 to 20. These normal unfoldings of a division and the presence of a retrograde reading do bear some resemblance to traditional serialism, but we should not exaggerate the link: Messiaen's divisions are not related to one another and why should he not state their contents in the order 1 to 8 (and one of them in retrograde)? Even if he knew nothing of serialism, these are hardly unexpected treatments of divisions/rows. Finally, there is one occurrence of an unstructured/inexact permutation,⁴⁵ this occurs in line 2 from bar 32 to the end: 7 8 1 2 4 3 5 6. These are the only organised unfoldings of divisions in the 'Modéré'. Lines 1 and 3 create a form of symmetrical balance by beginning and ending the section with ordered statements of their respective modes but, curiously, in a move that perhaps harks back to the first movement of the *Quatuor pour la fin du Temps*, Messiaen prematurely terminates everything in the last bar. In Ex. 5.3, which reproduces the final two bars of the section, note 8 of division 3 is struck at the beginning of the penultimate bar. Its duration should be a semibreve (eight quavers) but it is five semiquavers short of this.

Ex. 5.3 *Cantéyodjayâ*: End of 'Modéré' Section

⁴⁵ Permutation/Interversion techniques (the terms mean the same thing) will be discussed in detail in Chapter 7.

An examination of the final notes in lines 1 and 2 reveals similar premature terminations: the E-flat that concludes line 1 should last for a dotted quaver (six demisemiquavers—the sixth note of the division) but it is three semiquavers short of this; the D that concludes line 2 should have a duration of a dotted crotchet (six semiquavers—the sixth note of the division) but it is five semiquavers short of this.

There appears to be no apparent logic or rationale for ending the ‘Modéré’ section in this manner. It may be that Messiaen does not want his mode dictating how the section should end, in the same way that the processes in ‘Liturgie de Crystal’ were also terminated midstream, as it were. However, it is interesting to examine the total duration of this section. If the final note in line 3 were stated for its full duration, the ‘Modéré’ section would be 97 quavers long (this is most conveniently calculated by adding the values in line 3). This is a prime number, which is something that Messiaen had a penchant for in works prior to this. The actual duration of the section is 94.5 quavers, which, better expressed as whole number, is 189 semiquavers. This is not a prime number, but it is a number with an interesting property: it is a centred cube. In fact, it is the centred cube number of 4.⁴⁶ It is highly improbable that Messiaen was aware of this but, given that there are three divisions/lines, the fact that the total duration is governed by the number three is noteworthy.

It is worth highlighting a minor anomaly in the ‘Modéré’ section: the presence of a misplaced note/duration.⁴⁷ At the bottom of page 8 of the score (bar 14 of this section) Messiaen writes the final note (C) of division 1. In terms of conforming to the durations assigned to pitches (outlined in Ex. 5.1), this pitch should have a duration of eight demisemiquavers (one crotchet) but here Messiaen gives it a duration of five demisemiquavers (see the boxed note in Ex. 5.4). If Messiaen were to adhere strictly to the ‘mode de durées’ then this C should in fact be an A. Alternatively, if he wants a C at this point, the note written would need to be lengthened by three demisemiquavers, which would obviously have a knock-on effect on all the subsequent pitches in line 1.

⁴⁶ A centred cube number is the sum of two consecutive cube numbers. The series of cube numbers reads: 0 1 8 27 64 125 216. The series of centred cube numbers therefore reads: 1 (0+1) 9 (1+8) 35 (8+27) 91 (27+64) 189 (64+125).

⁴⁷ Like the missing chord in ‘Liturgie de Cristal’ (discussed in Chapter 4), this has not engendered any comment by Messiaen scholars.

Ex. 5.4 *Cantéyodjayâ*: Wrong Note/Duration?

It is difficult to read anything significant into this: it most likely resulted from a lapse in concentration, as possibly occurred with the missing chord in ‘Liturgie de Cristal’ from the *Quatuor* (discussed in detail in Chapter 4). However, given that the ‘Modéré’ section of *Cantéyodjayâ* is far less complicated than its revolutionary successor (*Mode de valeurs*) in which Messiaen’s meticulous attention to the various modes is unwaveringly accurate, this minor glitch is all the more glaring.⁴⁸ If one were to correct this mistake, a decision would have to be taken as to which is more important: the pitch or the duration. No issue of pitch class duplication or immediate repetition would arise if the note were changed to an ‘A’; this would be the better solution as none of the rest of the first line would need to be rewritten. Such minor ‘errors’ are rare but not unheard of in Messiaen’s music: for example, occasional errors also infiltrate ‘Les Yeux dans les Roues’ from the *Livre d’orgue* (this will be discussed in Chapter 8).

An analysis of the pitch distribution throughout the three divisions is given in Fig. 5.2. The most striking feature is the fairly even spread of pitches in division 3: the two Cs (note 8 of division 3) are the first and last notes struck in

⁴⁸ As with the missing chord in ‘Liturgie de Cristal’, it is debatable whether ‘wrong’ notes in such music actually matter or if they can even be heard as such. Speaking generally about contemporary music, Hans Keller makes the point that at times the minutia of individual pitches is perhaps less important than the overall colour or timbre desired. Commenting on some of the so-called ‘mistakes’ in serial music, he says ‘good twelve-tone composers can be shown to allow themselves irregularities in the treatment of their rows for the sake of remaining harmonically expressive’. See Hans Keller, ‘Wrong Notes in Contemporary Music’, *Tempo*, 90 (1969), 8–11 (p. 10). In this section of *Cantéyodjayâ* there is really no such thing as a wrong note *per se* because Messiaen is free to choose any note at any time, so long as no pitch class gets duplicated. I suspect that it would be much more difficult to write a convincing article entitled ‘Wrong Durations in Contemporary Music’ because Western people are far more susceptible to the nuances of pitch than rhythm.

line 3; the two E-flats (note 6 of division 3) are accounted for (i) in bar 10 immediately after division 2's 1–8 statement and (ii) as part of division 3's 1–8 statement at the end of the piece.

Fig. 5.2 *Cantéyodjayâ*: Pitch Distribution in 'Modéré' Section

Division 1		Division 2		Division 3	
D	17	F	7	Bb	4
C#	13	E	8	E	4
Bb	10	B	9	F#	3
G#	12	Bb	6	G#	3
A	9	Ab	5	C#	3
Eb	13	D	4	Eb	2
F#	8	A	5	G	3
C	10	Eb	4	C	2

Missing Pitch Classes

E	C	D
<u>F</u>	C#	<u>F</u>
G	F#	A
<u>B</u>	G	<u>B</u>

Four pitch classes are missing from each of the divisions. Fig. 5.2 shows that (i) pitch classes E C C-sharp F-sharp D and A are absent from one division; and (ii) pitch classes F, G and B are missing from two divisions. This means that pitch classes F and B (underlined in Fig. 5.2) are unique to division 2; pitch class G (in bold in Fig. 5.2) is unique to division 3. Given that each division consists of eight pitches it is tempting to see if there are any relationships between them. Reducing each division to its prime form and noting what pitches are absent provides some interesting results (see Ex. 5.5 below).

Ex. 5.5 *Cantéyodjayâ*: Pitch Class Analysis of the Divisions

Division 1

8-Z29 **4-Z29**

Division 2

8-9 **4-9**

Division 3

8-27 **4-27**

The prime form of division 1 is [0, 1, 2, 3, 5, 6, 7, 9], which is a special 8-note set (8-Z29 in Forte's labeling).⁴⁹ (Christopher Dingle, in conversation with the author, notes that these pitches are drawn from Mode 7). Focusing on the pitches that are absent from division 1 (its complement) results in the prime form [0, 1, 3, 7], which is the all interval tetrachord [111111] (set 4-Z29 in Forte's labeling). The prime form of division 2 is [0, 1, 2, 3, 6, 7, 8, 9] (set 8-9). The most noticeable feature of this set is that it consists of two groups of four semitones a tritone apart (see Ex. 5.5 above). Of particular interest here are the notes F and B, which begin each tetrachord (0, 1, 2, 3); these pitch classes are unique to this division. But perhaps the most startling revelation is that this is Mode 4 of Messiaen's Modes of Limited Transposition. The intervallic complement of this set [0, 1, 6, 7] (set 4-9) consists of two semitones, two perfect fourths and two augmented fourths [200022]. The prime form of division 3 is [0, 1, 2, 4, 5, 7, 8, 10] (set 8-27). This division is less structured than the first two but inherent in it are the notes of the dominant seventh [0, 4, 7, 10],⁵⁰ which accounts for the first four pitches in line 3: C G B \flat and E (granted, this unfolds over a relatively long duration of nine crotchets). This analysis reveals that some of the pre-composited

⁴⁹ The 'Z' stands for 'Zygotie' and in Forte's prime forms indicates that a set is twinned with another set because both share the same intervallic content but cannot be reduced to the same prime form.

⁵⁰ In Forte's system the prime form of a dominant seventh is [0 2 5 8] (set 4-27); interestingly, this is complement of Division 3.

material has its roots in the old Messiaen but the material is applied in a radically new way. It could also be argued that the strong dominant seventh unfolded in line 3 acts as a fundamental harmonic above which higher partials are played out. Many of Messiaen's complex chords from earlier in the decade were founded on such principles.

In conclusion, the singular most important aspect of the 'Modéré' section is the permanent assignation of duration and dynamics to a pitch; or, to better reflect Messiaen's subtitle to the section ('mode de durées' comes first), the permanent assignation of pitch and dynamics to a duration. Although there are only five distinct dynamic markings (*pp*, *p*, *mf*, *f*, *ff*), there is a strong sense of each pitch being a unique sonority. This mirrors Cage's approach in his *Sonatas and Interludes*, which Messiaen had heard only a few weeks earlier. The next chapter will discuss *Mode de valeurs*, in which the techniques tried out in one section of *Cantéyodjayâ* are further expanded and will dominate every aspect of the piece.

CHAPTER SIX

Quatre études de rythme: Mode de valeurs et d'intensités

6.1 *Mode de valeurs et d'intensités*

The pre-compositional material of ‘Modéré’ section of *Cantélyodjayâ* is greatly expanded in *Mode de valeurs*: the pitch content now encompasses twelve notes in each of its three divisions, cumulatively spanning the entire range of the piano, based once again on demisemiquaver, semiquaver and quaver units of duration respectively. Each note has one of seven dynamic markings and one of twelve articulation markings—this latter attribute was not present in *Cantélyodjayâ*. In the preface to the score Messiaen outlines the various modes and their interactions with each other.¹ Ex. 6.1 reproduces the three divisions with all their attributes (duration, dynamic, and articulation). It is worth reiterating the point that that this effectively creates a bank of sounds (strongly reminiscent of Cage’s *Sonatas and Interludes*)² on which Messiaen can draw; each pitch, with its unique set of parameters, acts as a colour to be placed on a canvas, and Messiaen, like a painter, can mix these colours in an infinite number of ways to create a kaleidoscopic aural feat in two dimensions—the horizontal and the vertical—through individual lines and their entwining counterpoint.

Ex. 6.1 *Mode de valeurs et d'intensités*: Three Divisions³

The image displays three staves of musical notation, labeled I, II, and III, representing different divisions of the 'Mode de valeurs et d'intensités'. Each staff contains a sequence of notes with various dynamic markings and articulation symbols. Staff I is marked '8va' and includes dynamics like ppp, ff, f, mf, and pp. Staff II includes dynamics like ff, mf, p, and f. Staff III is marked '8vb' and includes dynamics like ff, mf, p, and fff. The notation is complex, with many notes beamed together and various articulation marks above and below the notes.

¹ When first published, *Mode de valeurs* was the only *étude* with a preface (Christopher Dingle).

² See Section 3.4.

³ As with *Cantélyodjayâ*, the term ‘Division’ will be used when discussing the pre-compositional material; for discussions of the actual music the term ‘Line’ will be used.

Each division is best defined as a mode (and not a row) as it is non-transposable and is not confined to an octave span. Although Messiaen adheres to the serial convention of avoiding pitch duplication, whereby notes of the same pitch class are not stuck simultaneously, this is the only true serial attribute. Richard Toop notes that Messiaen ‘aims to leave a reasonable elapse of time (usually at least a crotchet) between a note and its repetition in that or another mode (i.e. octave).’⁴ This will be disputed and refuted later in my analysis. The analysis will also reveal that straightforward (normal) unfoldings of a division (for example, pitches in the order 1 to 12) are rare, but other ordered unfoldings make up a surprising amount of the music material: the use of permutations (or interversions, according to Messiaen) is, in theory, a new compositional approach for Messiaen.⁵ It is also worth noting at this point that duration is defined as the time-distance between two notes (attacks), and not necessarily the actual sounding-time of a note. For example, in division 3 the second note has a duration of one crotchet but it is always notated as a quaver plus a quaver rest. The perceived notion of a note’s duration is also affected by articulation; for example, a note marked staccato will sound shorter than notated but, again, its technical duration is defined by the sounding (attack) of the proceeding note. Although the attack/articulation of each note is fixed for the duration of the piece there are a few occasions when Messiaen has to modify an attack: for example, the use of a slur as an articulation mark creates a small problem because for the articulation to function properly a minimum of two notes must be slurred together. Therefore, if Messiaen chooses to follow a slurred note with a note that has no slur, he must abandon the articulation marking. Robert Sherlaw Johnson adequately sums up the limitations of a piece of music that uses such restrictive practices throughout:

Since each duration defines the interval between one note and the next in any given line, it is impossible to introduce rests or pauses in any part without lengthening the duration of a particular note beyond that allowed by the mode.⁶ In addition, chords are impossible, since each individual note of a chord would have to be succeeded by further sounds in order to characterise their duration, bearing in mind that the effective duration of a note is always to the beginning of the next

⁴ Toop, ‘Messiaen/Goeyvaerts’, p. 151.

⁵ Most scholars who discuss the piece mention them (see, for example, Johnson, *Messiaen*, p. 108) and they will show up in the detailed pitch analysis presently. Messiaen had already begun exploring permutation as a technique in earlier works: for example, see the four-note permutation discussed in *Cantéyodjayâ*.

⁶ There are rests in the piece but, as already mentioned, these do not affect a note’s duration.

sound [...] Because of the extreme limitations, this is the only piece in which Messiaen makes use of such a mode throughout.⁷

Given the information in Messiaen's preface and Johnson's assessment of the inherent limitations of the piece, it might appear a straightforward task to define what *Mode de valeurs* is. However, at this stage it is easier to say what it is not. The following statements by Johnson, and Messiaen (in conversation with Antoine Goléa), illustrate how Messiaen's 'mode' differs from traditional serialism—that of the Second Viennese School—and total serialism as seen in the early 1950s:

In traditional serialism the order of notes is fixed by the series (subject to the usual freedom of transposition, inversion, etc.), but its parameters are free. Conversely, in *Mode de valeurs et d'intensités*, the parameters of each note are fixed and its [the note's] order in relation to other notes is free.⁸

Mode de valeurs et d'intensités is modal, and not serial, precisely because each note is characterised, once and for all, by the same duration, the same intensity and the same attack; whereas in integral serialism the notes in turn are characterised by different durations, dynamics and timbres—the same sonority complex never returning for a second time during the course of the serial unfolding.⁹

From these observations, it can be argued that Messiaen's *étude* forms a bridge between the two serial approaches, but there can be no doubt that it tends more towards total serialism in its extraordinarily prescriptive notation. Paul Jacobs suggests that, since there is no room for interpretation on the part of the performer,

it forms a logical bridge to the aesthetics of electronic music. Interestingly, one of the consequences of pieces like this, which remove all the variables of performance, was the counter-movement that gave rise to the aesthetics of aleatory and controlled chance.¹⁰

⁷ Johnson, p. 107. The technique is revisited in some later works; see for example the seventh tableau, *Les Stigmates*, from Figs. 3 to 4 and 6 to 7 in *Saint François d'Assise*.

⁸ Johnson, pp. 106–07.

⁹ ' [...] *Mode de valeurs et d'intensités* est modal, et non sériel, précisément parce que chaque son se caractérise, une fois pour toutes, par la même durée, la même intensité et la même attaque ; alors qu'on sait que, dans la musique sérielle intégrale, les sons, tour à tour, se caractérisent par des durées, des intensités et des timbres différents, les mêmes complexes sonores ne revenant jamais deux fois au cours d'un déroulement sériel.' Goléa, *Rencontres*, p. 250.

¹⁰ Gartner, *Expansion of Pianism*, p. 124, citing Paul Jacobs, *Piano Etudes by Bartók, Busoni, Messiaen, Stravinsky*, jacket notes for Nonesuch H-71334. An interesting follow-up to this comment is the different approaches taken by Cage and Boulez in the 1950s (as recollected in *The Boulez-Cage Correspondence*) where, despite the former's use of chance and the latter's use of extreme organisation, the resulting music shared a common aesthetic, or a common perceived impenetrability.

Klaus Schweizer also notes that, had the piece been written for an instrumental ensemble, the nuances of timbre, as determined by dynamic and attack, would have possessed greater individuality, or at least be easier to distinguish.¹¹ Some form of solution to this issue (although this is not to suggest that it was an issue for Messiaen) is to be found in the complex combinations of timbre created by specifying detailed registrations in the *Livre d'orgue* (see chapters 8 and 9).

Returning to *Mode de valeurs*, Richard Toop comments that there are still aspects of number symbolism present, something that has always been a strong characteristic of Messiaen's music in the 1930s and 1940s. For Toop, the strongest symbolic number is 'three', given that there are three divisions and three occurrences of the C-sharp of division 3. He also claims a strong link to the Ars Antiqua motet, 'namely the simultaneous presentation of the three "speeds" in the three voices, with the duplum (Line 2) written in longer values than the triplum (Line 1) and the tenor (Line 3) in still longer values'.¹² Messiaen also suggests the notion of three different tempi (see section 6.2 below).

Messiaen rightly criticises authors who describe *Mode de valeurs* as a canon, despite the similarities between the pitch material of divisions 1 and 3 (compare the first five notes of each in Ex. 6.1). Michèle Reverdy notes that the pitches of division 3 share the same arrangement of those of division 1, albeit in a different register:¹³ the first three notes of divisions 1 and 3 are identical, and notes 4 and 5 of division 3 duplicate notes 5 and 6 of division 1—the A-flat (note 4, division 1) serves to disrupt the imitation. However, despite these preliminary similarities, there is no real sense of division 3 imitating division 1. If there were to be a canon or imitation this would need to be reflected in the music, not merely in the pre-compositional material.

One of the most striking features of *Mode de valeurs* (see the opening of the piece in Ex. 6.2 below) is the three-part contrapuntal/heterophonic nature of

¹¹ Klaus Schweizer, 'Olivier Messiaens Klavieretude "Mode de valeurs et d'intensités"', *Archiv für Musikwissenschaft*, 2 (1973), 128–46 (p. 135).

¹² Toop, 'Messiaen/Goeyvaerts', p. 150.

¹³ Reverdy, pp. 66–67.

the lines. This results in a pointillist texture devoid of an overt sectional structure, which, up until now, was uncharacteristic of Messiaen.¹⁴

Ex. 6.2 *Mode de valeurs et d'intensités*: Opening¹⁵

The musical score for the opening of *Mode de valeurs et d'intensités* is presented in two systems. The first system contains measures 1 through 10, and the second system contains measures 11 through 12. Each measure is divided into three parts, with notes numbered 1 through 12 above them to indicate their position and duration. Dynamic markings such as *ppp*, *ff*, *f*, *mf*, *p*, and *sff* are used throughout the piece. The notation includes various note values, rests, and articulation marks like accents.

Focussing on individual staves (or all three at once) has been a feature of most scholarly analyses. Kate Covington, in her article ‘Visual Perception vs. Aural Perception: a look at *Mode de valeurs et d'intensités*’, suggests that, because of the overlapping of the divisions, the ear hears not three unfolding rows/divisions but up to six ‘planes’ of sound depending on register and timbre etc.¹⁶ For example, she defines Plane III as ‘notes which are accented and marked

¹⁴ Griffiths uses the phrase ‘three-part heterophony of lines moving in chromatic durations’ to describe the work. See Griffiths, *Olivier Messiaen*, p. 151. The lowest note of Line 3 (C-sharp) is heard only three times during the course of the piece, which gives the work some semblance of a tripartite structure.

¹⁵ The numbers above the notes refer to a note’s position and duration (in either demisemiquavers (line 1), semiquavers (line 2), or quavers (line 3)) within the division.

¹⁶ Kate Covington, ‘Visual Perception vs. Aural Perception: a look at *Mode de valeurs et d'intensités*’, *Indiana Theory Review*, 3 no. 2 (1980), 4–11.

fortissimo' and highlights five high register notes that conform to this.¹⁷ I would agree that it is highly questionable whether a listener hears (or perceives) the unfolding of three distinct lines. Covington's six planes were ascertained after repeated listenings but for most people, upon hearing it for the first time, it could be argued that the music comes across as a single monadic line with occasional 'chords'.

Before launching into a detailed analysis of the piece, it is prudent to assess Messiaen's own thoughts on the work as recounted in his *Traité de rythme*.¹⁸

6.2 Messiaen's analysis in the *Traité de rythme de couleur et d'ornithologie*

Messiaen's comments or observations ('analysis' is perhaps too strong a word) on *Mode de valeurs* in Volume III of his *Traité de rythme* highlight the pre-compositional processes that give rise to the three divisions as seen in Ex. 6.1. He highlights how the shortest durations equate to the highest notes (and the longest durations to the lowest notes), and suggests the phrase '*registres rythmiques*' (rhythmic registers) to classify the rhythmic features of the divisions. Messiaen goes a stage further by putting forward the notion of three simultaneous tempi: *presto* in division 1, *moderato* in division 2, and *andante* in division 3, with the addition of *adagio* for the final three notes.¹⁹ Hill and Simeone, who have seen Messiaen's diaries of this period, note that this notion of a 'Faire des series de tempo' dates back as early as 1945 and that by 1947 he had plans for a set of rhythmic studies.²⁰ Messiaen's discussion of dynamics and chromatic rhythm in the *Traité* adds little more than the preface to the score provides, but one point is significant; the concept of fixed timbre, which I have argued can be traced back to Cage, is further strengthened by the fact that notes of the same pitch class are all different with respect to duration, dynamics and articulation: that is, each pitch class has unique characteristics. Messiaen illustrates the first two attributes by tracing the occurrences of E-flat, G and C

¹⁷ Covington, 'Visual Perception', p. 7.

¹⁸ See also Hill and Simeone's succinct overview of the piece (p. 191), which draws on Messiaen's writings in the *Traité*.

¹⁹ *Traité*, III, p. 126.

²⁰ Hill and Simeone, p. 178.

sharp in each of the divisions. In addition, he highlights the different registers each occupies, and later comments on the unique attack/articulation of pitch classes of the same name.²¹

The remainder of Messiaen's analysis concerns various instances of permutation and other 'ordered' readings of the divisions, which will be commented on in the following paragraphs. Of greater interest at this stage is his final paragraph where some insight into his thinking behind the piece may be gleaned. Such paragraphs are in short supply throughout the *Traité*: the reader frequently encounters tediously repetitious analytical observations that demonstrate obvious compositional techniques. Messiaen's summing-up of *Mode de valeurs* is as follows:

It's not a question of cold-shouldering the series by giving each parameter a fixed position. Neither is it about imposing modality on the series or tonality. The interest of *Mode de valeurs et d'intensités* consisted of three events: 1) attacks, dynamics, and durations or values were put on the same level as the notes - with perhaps a marked predilection for *duration and dynamics* [...] 2) the whole mode constituted a colour, very different from orchestral colours or colours of tones - a colour of duration and intensity, destined to change the greyness of the series of notes and to give rise to research into other colourations. 3) In crude series the changing of the octave was immaterial [...] here each note of the same name changes its duration, attack and dynamic in each sonorous region in which it is found. The new thing was precisely this change, this influence of register on the quantitative, phonetic and dynamic state of the sound, and this separation in three temporal areas transforming, in passing, the life of the sounds that cross them. It was undoubtedly a constraint, but a coloured constraint, a constraint that contained potential freedom, several (greater) freedoms, other freedoms.²²

²¹ *Traité*, III, p. 126.

²² 'Il ne s'agit pas de boudier la série en assignant à chaque paramètre une place fixe. Il ne s'agit pas non plus d'opposer modalité à la série ou à tonalité. L'intérêt du « Mode de valeurs et d'intensités » consistait en trois événements : 1) les attaques, les intensités, et les durées ou valeurs étaient mises sur le même plan que les sons – avec même une prédilection marquée pour les *durées et les intensités*, plus oubliées que les timbres et attaques, beaucoup plus oubliées que les sons (cette prédilection figure déjà dans le titre). 2) l'ensemble du mode constituait une couleur, très différente des couleurs orchestrales ou couleurs de timbres – une couleur de durées et d'intensités, destinée à varier la grisaille des séries de sons, et à susciter la recherche d'autres colorations. 3) dans les séries primitives, le changement d'octave ne comptait pas, [et le déroulement pouvait toucher à tous les registres sonores] – ici chaque son de même nom change de durée, d'attaque, et d'intensité, à chaque région sonore qu'il occupe. La chose nouvelle était précisément ce changement, cette influence du registre sur l'état quantitatif, phonétique et dynamique du son, et ce départage en trois régions temporelles transformant au passage la vie des sons qui les traversent. C'était sans doute une contrainte, mais une contrainte colorée, une contrainte qui contenait en puissance la liberté, plusieurs libertés, d'autres libertés.', *Traité*, III, p. 131.

6.3 Rhythmic Considerations

Robert Sherlaw Johnson, commenting on the complexity of Messiaen's rhythmic language in the mid-to-late 1940s believes that the sheer scale of superimposition upon superimposition of rhythms, harmonies and melodies—particularly in the *Turangalîla-Symphonie*—meant that a simplification in structure was inevitable.²³ One possible conclusion to be drawn from this is that by the time Messiaen came to write *Mode de valeurs*, his research into rhythm had peaked and the level of complexity had reached its zenith. Johnson's comment that the works of the next few years are simpler in structure and contain new researches into rhythm and duration is, it could be argued, only half true. First, in writing his *Quatre études* for piano (emphasising the instrument), it would be expecting rather a lot of the performer to be able to reproduce the complex rhythmic counterpoint seen in *Turangalîla*. Second, although *Mode de valeurs* and the pieces that make up the *Quatre études* do not contain rhythmic pedals or *deçî-tâlas*, there is a strong concentration on chromatic rhythm, which has its precedent in other works from the 1940s.²⁴ However, according to Reverdy, with specific reference to the *deçî-tâlas*, the opening of division 2 bears a strong resemblance to the rhythm *lakshmiçâ*—semiquaver, dotted semiquaver, quaver, crotchet—the essence of which is to generate a progressive *rallentando*, but it could be argued that this is merely coincidental.²⁵

Johnson's assertion of a simplification in structure in the works after *Turangalîla* (mentioned above) does not really take into account the complex linear and horizontal rhythms that arise from the placement of pitches in *Mode de valeurs*. One of the most arresting effects to result from this is in fact the apparent impenetrability of the structure. Without the tolling of bottom C-sharp from division 3 there would be very little to provide the listener (or performer) with some semblance of structure (i.e. giving a sense that a section has ended or that something new is beginning). With this in mind, it could be argued that, contrary to Johnson, subsequent works are not necessarily 'simpler in structure'. Take, for example, the first and last pieces of the *Livre d'orgue*: both are *tours des forces* in their rhythmic complexity and give rise to musical structures only

²³ Johnson, p. 94.

²⁴ See the examples in Chapter 4.

²⁵ Reverdy, pp. 66–67.

truly visible to the eye and not the ear. Finally, despite the complex sonorities created in *Turangalîla*, the listener can still perceive a sectional structure in that work, which enables the various components or constituent parts to be compartmentalised and recognised in different formations or contexts throughout; the same can be said of *Cantéyodjayâ* but this cannot be said of *Mode de valeurs* and some of other pieces from this experimental period. In fact, this move away from juxtaposition to through-composed or continuous music is itself relatively new for Messiaen.²⁶

6.4 Timbre in *Mode de valeurs*

With each division in *Mode de valeurs* containing twelve pitches and twelve durations, an obvious one-to-one correlation exists, but it quickly becomes apparent that the twelve attacks, to be deployed on thirty-six pitches, do not occur a uniform three times each, nor is each type of attack necessarily present in each division, as Fig. 6.1 below illustrates:

²⁶ It would be wrong to assume that Boulez's 'juxtaposition' criticism should be applied to all of Messiaen's music prior to 1949. The 'Liturgie de Cristal' is but one example of continuous music.

Fig. 6.1 *Mode de valeurs: Distribution of Attacks*

Articulation	Division 1	Division 2	Division 3	Total
>	2	0	3	5
!.	1	0	0	1
.	1	0	0	1
-	2	4	2	8
(2	5	2	9
>! .	0	0	1	1
> .	0	0	1	1
> - .	1	0	1	2
(: : :	0	2	0	2
sf > .	0	0	1	1
sf > .	0	1	0	1
None	3	0	1	4
	12	12	12	36

A cursory glance at this table shows a reasonable distribution of attacks in divisions 1 and 3, but a marked concentration on two types of attack in division 2. An examination of how dynamics are assigned also reveals a less-than-equal distribution, as Fig. 6.2 below illustrates:

Fig. 6.2 *Mode de valeurs: Dynamics (Intensités)*²⁷

	Division 1	Division 2	Division 3	Total
ppp	2	0	0	2
<i>pp</i>	1	1	1	3
<i>p</i>	1	4	1	6
<i>mf</i>	2	2	2	6
<i>f</i>	2	4	1	7
<i>ff</i>	4	1	5	10
<i>fff</i>	0	0	2	2
Total	12	12	12	36

²⁷ Arnold Whittall suggests that the employment of seven dynamics (rather than twelve 'ranging from *pppppp* to *fffff*', which is theoretically possible) is a more 'realistic arrangement'. See Arnold Whittall, *Musical Composition in the Twentieth Century* (New York: Oxford University Press, 1999), p. 253.

The extreme dynamics, *ppp* and *fff*, are reserved for the highest and lowest notes respectively (E-flat and D in division 1, and B-flat and C-sharp in division 3) with the remainder of divisions 1 and 3 having at least one of each dynamic. Division 2, once again, needs to be singled out: Richard Toop, who described division 2 as a ‘middle voice’, says ‘it has neither the velocity and brilliance of the upper part, nor the warmth and resonance of the lowest part, and its durations lie within a relatively neutral field (semiquaver to dotted minim)’.²⁸ With this in mind, and returning to Fig. 6.2, it can be seen that the dynamic concentration in division 2 is centred around *p*, *mf* and *f*; these dynamics account for ten of the twelve notes (the remaining two notes are marked *pp* and *ff*).²⁹ Messiaen has consciously applied ‘median’ dynamics and essentially static attacks to the pitch content of division 2, which occupies the middle register of the piano; the attacks could be described as ‘median’ if one considers the position of the slur and tenuto markings within the context of all the attacks. The potentially ‘melodic’ quality of division 2 is therefore very carefully constructed; notes 4–5 and 6–8 are slurred and marked *piano* or *pianissimo*, and notes 9–12 are all *forte* and marked with tenuti.

So, although the application of dynamics and attacks may appear arbitrary on a first reading, it is Messiaen’s integration of all the musical parameters that reveals the music’s *raison-d’être*. In this respect, it will become apparent that thematicism, or at least the presence of motifs, plays an integral part in the work’s aesthetics—something that is usually only mentioned in passing by scholars.³⁰ As discussed in Chapter 3, Leibowitz spoke out against working with individual musical parameters (conveniently forgetting that in traditional serialism the pitch material is pre-composed). In *Mode de valeurs*, Messiaen would have worked on the various parameters individually but he creates a cohesive whole that surely should have met with Leibowitz’s approval. This careful consideration of timbre, and its interaction with pitch and duration,

²⁸ Toop, ‘Messiaen/Goeyvaerts’, p. 146.

²⁹ As an aside, those familiar with Messiaen’s penchant for numbers and symmetry will also notice that the ‘dynamic’ summary of division 2 reads as a non-retrogradable series.

³⁰ Griffiths (*Olivier Messiaen*, p. 146) alluded to the presence of ‘motivic islands’ in *Cantéyodjayâ* and the same logic can be applied to *Mode de valeurs*. This will be discussed in Section 6.5.1.

means that timbre is no longer merely an adjunct but a vital part of the composition process.³¹

6.5 Detailed Pitch Analysis

This heading could have read ‘Detailed Rhythmic Analysis’, given that there is one-to-one correlation between pitch and rhythm. However, it is much easier and clearer to analyse the music through its pitch content. Much has been written about how Messiaen constructs each of the three divisions, from the relatively small intervals of division 1 to the larger intervals of division 3. This has an obvious parallel with the harmonic series in which higher partials are much closer together. As mentioned earlier, another important feature of each pitch class is that all three occurrences are different with respect to octave, duration and timbre (dynamic and attack).³² Toop notes Stockhausen’s reservations to developing a chromatic series in this manner: ‘A truly chromatic scale of values would comprise 12 durations with a ratio of 1:2 between the fundamental and the 12th interval (i.e., the beginning of the “octave”).’³³ Toop comes to Messiaen’s defence: ‘As it happens, the 3 divisions of Messiaen’s pitch mode cover $2\frac{2}{3}$, $2\frac{5}{6}$, and $4\frac{1}{6}$ octaves, respectively [...]. So even though there is no precise equivalence, [...] one can at least claim that the two [pitch and duration] are organized on analogous principles’.³⁴ Toop also has a schematic that shows how all thirty-six pitches are distributed.³⁵ The ‘Pitch Distribution’ table below (Fig. 6.3) tabulates the number of occurrences of each pitch in each line/division.

³¹ As discussed in Chapter 1, Boulez saw in the works of Webern and others the importance of timbre as an integral part of the composition process.

³² Messiaen also comments on this in the *Traité* (III, p. 126); see also Schweizer, ‘Olivier Messiaens Klavieretude’, p. 136. Schweizer lines up each pitch class to illustrate their unique sonorities. Inevitably, there are some close relations: for example, pitch class A is marked *f* tenuto in division 2 and *mf* tenuto in division 3.

³³ Toop, ‘Messiaen/Goeyvaerts’, p. 147.

³⁴ Ibid.

³⁵ Ibid., p. 149.

Fig. 6.3 *Mode de valeurs*: Pitch Distribution

Division 1	Division 2	Division 3
E \flat 33	G 35	E \flat 20
D 29	C 25	D 13
A 26	B \flat 21	A 13
A \flat 27	A \flat 22	G 8
G 21	F 15	F \sharp 10
F \sharp 18	E 12	C 8
E 18	E \flat 10	A \flat 6
C \sharp 26	D 11	F 4
C 20	C \sharp 11	B 5
B \flat 19	B 9	E 4
F 23	F \sharp 7	B \flat 4
B 28	A 7	C \sharp 3

In Fig. 6.3 the twelve pitches in each division are presented from the highest to the lowest and there is a rough correlation between a pitch's position in a division and the number of occurrences of that pitch. In divisions 2 and 3 there is a descending numerical sequence, albeit with one or two small exceptions (division 2: pitch 4 (A-flat) and division 3: pitch 5 (F-sharp) disrupt the descending progression). The first seven notes of division 1 also follow this process (albeit with note 4 (A-flat) marginally out of place) but thereafter no clear pattern is discernible. It is clear that because division 1 is made up of the shortest durations in the piece, it is inevitable that each of the twelve notes will be played much more frequently than their counterparts in the two other divisions. As a result of this, division 1 has a strong improvisatory feel: Messiaen draws more freely from its bank of sounds.

Ex. 6.3 shows the total number of occurrences of each pitch class, firstly tabulated as an ascending chromatic scale (C to B) and then rearranged in descending numerical order from the most to the least frequent.

Ex. 6.3 Total Occurrences of each Pitch Class



The surprising result is that the very prominent E-flat of divisions 1 and 3 is not the most common pitch class. Secondly, the powerful C-sharp of division 3 is not the least frequent pitch class. The most frequent pitch class, G, is readily explained by its being note 1 of division 2 and notes 5 and 4 of divisions 1 and 3 respectively: in other words, it has relatively short durations in all three divisions.

Ex. 6.4 (below) reproduces the entire pitch content of the piece and illustrates how the work unfolds as if it were one line (in a very pointillist style) with occasional ‘chords’. The analysis is only concerned with pitch classes and does not take a note’s duration or register into account. Therefore, each bar of the music analysis only shows the order of attacks. From this analysis it can be posited that a substantial part of the piece is monadic (although as notes are held, ‘textures’ build); instances of dyads and triads are boxed in the analysis and indicate simultaneous attacks. The analysis also provides an interesting insight into how Messiaen deals with twelve-tone material across all three divisions; by this, I mean how long it takes for all twelve pitch classes to be stated (irrespective of division). This analysis should not be confused with structured twelve-tone permutations of the divisions, which will be discussed later. The small numbers tabulate unique pitches at the start of each twelve-tone section and are not related to the numbers associated with a note’s position in the divisions. (The first complete twelve-tone unfolding is analysed in detail: thereafter only the first unique pitches of each new twelve-tone section are annotated.) The piece begins with nine unique pitch classes before there is substantial repetition. The final pitch class required (12 C-sharp) is heard in the ‘triad’ in bar 5 (this will be commented on later).

There are twenty-three complete statements of all twelve pitch classes; the final statement (number twenty-four) is incomplete. For the purpose of analysing the entire pitch content in this way, the ‘rows’ numbered in Ex. 6.4 mark the very next pitch after all twelve pitch classes have been stated. It will be seen in the detailed analysis to follow that Messiaen has a strong tendency to state as many as nine unique pitches before any pitch class repetition. There is only one instance in the entire piece where Messiaen states all twelve pitch classes within the space of twelve attacks (see bars 52–53 of Ex. 6.4). These bars are also part of a structured permutation, which will be discussed later (see Ex.

6.6). Immediately after this, in bar 54, the next set of twelve-tone unfolding begins. In this instance Messiaen states six unique pitches before any repetition of a pitch class.

Ex. 6.4 *Mode de valeurs*: Cumulative Pitch Content

The musical score illustrates the cumulative pitch content across nine measures, with each measure introducing new pitch classes while maintaining previous ones. The measures are numbered 1 through 9, and the cumulative pitch classes are listed below each measure:

- Measure 1:** 1 2 3 4 5 6 7 8 9 (4 6) 10 11 (7) (4) (5) (11) (7) (10) (5) (9) (1) (11) 12 (2 3)
- Measure 2:** 1 2 3 4 5 6 7 8 9 10 11 12
- Measure 3:** 1 2 3 4 5 6 7 8 9 10 11 12
- Measure 4:** 1 2 3 4 5 6 7 8 9 10 11 12
- Measure 5:** 1 2 3 4 5 6 7 8 9 10 11 12
- Measure 6:** 1 2 3 4 5 6 7 8 9 10 11 12
- Measure 7:** 1 2 3 4 5 6 7 8 9 10 11 12
- Measure 8:** 1 2 3 4 5 6 7 8 9 10 11 12
- Measure 9:** 1 2 3 4 5 6 7 8 9 10 11 12

The score also includes a division sign (Div 3: C#) above the staff in measure 6.

44 10

49 11 Unique

53 12-note row 12

57 13

62 14

67 15

72

76 16 Div 3: C#

80 17

Fig. 6.4 provides a summary of the above analysis. The smallest number of unique pitches (four) occurs in statements 16 and 20; statements 4, 9 and 15 also start with a small number of unique pitches, but after repeating one of these pitches they continue with several new pitches.

Fig. 6.4 12-tone Unfolding Across all Divisions

No.	Bars	Attacks	Pitches	12-tone Unfolding
1	1-5	21	26	1 2 3 4 5 6 7 8 9 (+ triad)
2	6-11	25	26	1 2 3 4 5
3	11-17	26	28	1 2 3 4 5 6 7
4	17-21	22	22	1 2 3 (1) 4 5 6 7 8
5	22-26	21	23	1 2 3 4 5 6
6	27-32	28	33	1 2 3 4 5 6 (+ C-sharp Div 3)
7	33-36	16	18	1 2 3 4 5 6 7
8	36-42	22	27	1 2 3 4 5 6 (+ triad)

9	42-47	18	21	1 2 3 4 (2) 5 6
10	47-51	22	27	1 2 3 4 5 6 7 8 (+ triad)
11	52-53	11	12	1 2 3 4 5 6 7 8 9 10 11 12 (unique)
12	54-57	21	23	1 2 3 4 5 6 (+ triad)
13	58-64	26	29	1 2 3 4 5 6 7 8
14	64-68	20	21	1 2 3 4 5 6
15	68-75	35	39	1 2 3 4 (2) 5 6 7 (+ triad)
16	78-80	22	27	1 2 3 4 (+ C-sharp Div 3)
17	80-83	18	21	1 2 3 4 5 6 7 8 9
18	84-88	15	18	1 2 3 4 5 6 7 8 9
19	88-92	17	19	1 2 3 4 5 6 7 8 9
20	92-98	26	31	1 2 3 4
21	98-101	16	16	1 2 3 4 5 6 7 8
22	101-105	20	20	1 2 3 4 5 6
23	105-110	26	30	1 2 3 4 5 6
24	110-115	10	14	1 2 3 4 5 6 7 (4) 8 (+ C-sharp Div 3) Incomplete (9 10 11 12)
	Total	504	571	

Fig. 6.4 provides a simple method of tabulating the number of pitches. There is obviously a distinction between the number of attacks and the total number of pitches, as occasional dyads and triad arise.

The total number of pitches is 571, which is a prime number, but the actual number of attacks is only 504 (because of the occurrence of several dyads and triads). These dyads and triads are, for the most part, a result of inevitable simultaneities and not too much should be read into them. (That said, I will comment on the triad in bar 5 shortly). Of the 504 individual attacks, there are 442 single notes (which makes up about 88 per cent of the piece), fifty-seven dyads and five triads. It comes as no surprise to find that the total number of pitches is a prime number and, with this in mind, it is tempting to see if there is anything significant about the number 504. It turns out that this number is part of the Tribonacci series. This series of numbers is similar to the Fibonacci series but instead of a number being the sum of the previous two numbers in the series, it is now the sum of the previous three numbers. As a result, the Tribonacci series begins with two zeros (rather than one) and is as follows:

0 0 1 1 2 4 7 13 24 44 81 149 274 **504** 927

I acknowledge that sometimes analysis can be contrived to prove anything; but, even with that caveat, these are interesting results.

Ex. 6.5 is an analysis of the opening five bars but examined from the point of view of the total pitch content (across all three divisions) with respect to

twelve-tone writing (for convenience the score is condensed from three to two staves). The numbers in this example do not correspond to a note's position within a particular division; they merely show how long it takes for all twelve pitch classes to be stated. Bar 1 contains entirely unique pitches (from 1 to 9); the A-flat in bar 2 is a repetition and thereafter further pitch classes are repeated until the end of bar 5 where the C-sharp completes the first complete statement of all twelve pitch classes. The aural effect of this is very striking: it is the first time that a triad (in the sense of notes being struck simultaneously) is heard and all the notes last for at least one crotchet beat; this contrasts greatly with the pointillist opening and, with its stability, creates an early moment of relief—a rarity in a piece that proceeds relentlessly.

Ex. 6.5 *Mode de valeurs*: bb. 1–5, 12-tone Analysis

Messiaen intentionally makes an event of this final pitch class: the fact that it is C-sharp is not without significance, given that this note plays a prominent role in providing ‘divisional’ markers in the piece (this pitch appears only three times—and is the lowest note—of Division 3). On this basis, the twelve-tone analysis above is justified. The most significant concentration of twelve unique pitch classes without repetition occurs in bars 52–53 (as highlighted in Ex. 6.4 and Fig.

6.4). This is unlikely to have happened by accident. Ex. 6.6 shows the twelve consecutive pitch classes spread across the three divisions in bars 52–53; the example also shows the next complete twelve-tone statement (starting in bar 54): in this instance Messiaen states six pitches before any repetition of a pitch class.

Ex. 6.6 *Mode de valeurs*: bb. 52–57, 12-tone Unfolding

The musical score for Ex. 6.6 is written for piano in 2/4 time. It consists of two systems of staves. The first system (bars 52–53) shows the initial unfolding of the twelve-tone series. The second system (bars 54–55) shows the continuation of the series. Pitch classes are numbered 1 through 12. Some notes are tied from the previous bar. An 8va marking is present above the first system.

Ex. 6.7 is a condensed pitch analysis of these bars. In addition to the twelve-tone unfolding, division 1 states a structured permutation of its twelve pitches in the following order: 6 7 12 1 5 8 11 2 4 9 10 3 (the formatting indicates how the permutation is structured).

Ex. 6.7 *Mode de valeurs*: bb. 52–57 Pitch Analysis³⁶

12-tone unfolding

The image displays two staves of musical notation. The first staff, labeled '52', shows a 12-tone unfolding with notes numbered 1 through 12. Above the staff, the numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 are placed above the notes. Below the staff, the notes are grouped into 'Division 1' with boxed numbers: 6, 7, 12, 1, 5, 8. The second staff, labeled '55', shows a continuation of the 12-tone unfolding with notes numbered 7 through 12. Above the staff, the numbers 7, 8, 9, 10, 11, 12 are placed above the notes. Below the staff, the notes are grouped into 'Division 1' with boxed numbers: 11, 2, 4, 9, 10, 3.

A pitch analysis of the opening 18 bars (see Ex. 6.8 below) yields the following:

- The piece opens with nine unique pitches
- Bar 5 (the second twelve-tone unfolding) begins with five unique pitches
- Bar 11 (the third twelve-tone unfolding) begins with seven unique pitches
- Bar 17 (the fourth twelve-tone unfolding) begins with three unique pitches, a repetition of pitch 1, and then five unique pitches
- From bar 15 to 18 there is an almost complete retrograde statement of the pitches in division 1: 12 11 10 9 5 4 3 2 1. As these notes are part of a structured statement of the division, their numbers are boxed. Pitches 8 and 6 (F-sharp and C sharp) are present in other divisions and pitch 7 appears at the end of bar 18.

³⁶ Boxed numbers will be used to illustrate structured unfoldings (permutations) of a division; these numbers refer to a note's position/duration within the division. The unboxed numbers represent the twelve-tone unfolding of unique pitch classes across the three divisions.

Ex. 6.8 *Mode de valeurs: bb. 1–18, 12-tone Unfolding*

12-tone unfolding

12-tone unfolding

12-tone unfolding

Division 1

12-tone unfolding

It is important to distinguish between twelve-tone unfolding (across all divisions) and the permutation of a division's twelve pitches. The 'Note Data' table below [Fig. 6.5] reproduces how the pitches—and by default, the durations—unfold in each of the three lines.³⁷ The numbers highlighted in bold show calculated and pre-composed permutations within a division (not all of which are complete). The numbers refer to a note's position/duration within the division and are fixed: for example, in division 1 the number 1 always refers to E-flat and has a duration of one demisemiquaver; in division 2 the number 1 always refers to G and has a

³⁷ For an alternative approach see Michael Stegemann, 'Olivier Messiaen: Mode de valeurs et d'intensités', in *Werkanalyse in Beispielen*, ed. by Siegmund Helms and Helmuth Hopf (Regensburg: Gustav Bosse, 1986) pp. 360–69.

duration of one quaver. What is immediately clear from this table [Fig. 6.5] is the distinct lack of complete (twelve-tone) statements of a division reading in the order 1 to 12. (I showed that such statements were a part of the ‘Modéré’ section of *Cantéyodjayâ*.) There are two main reasons for this: first, Messiaen does not intend each division to function as a row in the traditional serial sense so there is no reason to expect a statement in the order 1 to 12; second, because of the chromatic durations, a complete statement of any division in the order 1 to 12 would create the effect of a large *rallentando*. (Messiaen already employed this (and *accelerandi*) in *Vingt regards* and other works from the 1940s). For interest, further on I have produced a hypothetical opening whereby each division unfolds in the order 1 to 12 (see Ex. 6.16).

Fig. 6.5 *Mode de valeurs*: Pitch Analysis³⁸

Bar	Line/Division 1	Line/Division 2	Line/Division 3
1	1-2-3r-4r-6-	1-2-3-	9-
2	5-7-10-	4-5-	(9)-
3	(10)-11-	(5)-1-2-3-6-	(9)-
4	(11)-12-11-	(6)-7-	6-
5	(11)-8-	(7)-8-	(6)-3-
6	9-12-	(8)-9-	(3)-4-
7	(12)-9-4r-	(9)-1-10-	(4)-5-
8	(4)-3r-5-7	(10)-	(5)-1-2r-
9	(7)-10-12	11-	(2)-7-
10	(12)-1-2-3r-8-	(11)-1-2-3-	(7)-
11	(8)-1-2-4-7-	(3)-10-	8-
12	(7)-10-12-	(10)-12-	(8)-
13	(12)-1-2-4-	(12)- 1-	11-
14	5-8-9-	4-5-	(11)-
15	(9)-12-	(5)-1-6-	(11)-1-
16	(12)-11-10-	7-8-	4-
17	(10)-9-	(8)-9-	5-
18	5-4r-3-2-1-7-	(9)-	(5)-6-
19	(7)-3r-5-8-	4-8-	(6)-1-
20	(8)-10-	(8)-12-	5-
21	12-11-	(12)-	(5)-1-2r-
22	(11)-1-3r-1-8-	11-	10-

³⁸ For the purpose of analysis the pitches of each line are numbered 1 to 12 following the duration/order of the preface divisions. Number sequences in bold and a larger font size will be commented on in subsequent discussions. An ‘r’ after a number indicates that the note is shortened by reducing its value and adding a rest so as not to change the ‘duration’. This can be seen in lines 1 and 3: in line 1 notes 3 and 4 are sometimes altered whereas in line 3, note 2 is always written as a quaver plus a quaver rest rather than as a crotchet.

23	(8)-12-	(11)-9-	(10)-
24	1-12-2-11-	(9)-7-	(10)-3-
25	(11)-3r-10-	(7)-6-	(3)-4-
26	(10)-4r-9-	(6)-5-4-	(4)-5-
27	(9)-5-8-	(4)-3-2-1-	(5)-1-2r-
28	(8)-6-7-2-	4-1-2-3-	(2)-1- 12-
29	9-1-2-12-	(3)-4- 1-2-	(12)-
30	(12)-10-	(2)-3-12-	(12)-
31	(10)-1-2-4r-12-	(12)-	(12)-6-
32	(12)-11-	11-	(6)-
33	10-5-6-	(11)-10-	7-
34	(6)-7-9-	(10)-5-	(7)-9-
35	(9)-8-1-2-	(5)-4-6-	(9)-
36	1-11-3r-9-	(6)-9-	(9)-
37	(9)-5-7-	(9)-8-	1-3-
38	(7)-8-4-	(8)-7-	4-
39	10-2-12-	(7)-1-11-	2r-6-
40	(12)-7-1-	(11)-	(6)-
41	2-12-6-	3-9-	7-
42	(6)-5-7-	(9)-5-	(7)-1-
43	8-9-	(5)-7-	2r-11-
44	(9)-11-3r-6-	8-	(11)-
45	(6)-7-8-	4-10-	(11)-
46	(8)-10-11-	(10)-2-	(11)-5-
47	(11)-12-	12-	(5)-4-
48	(12)-1-2-4-5-	(12)-6-	(4)-3-
49	(5)-8-7-	(6)-4-1-2-	(3)-2r-1-
50	11-12-	(2)-3-1-4-	3-1-
51	(12)-8-6-	(4)-1-5-1-	6-
52	(6)-11-	9-	(6)-2r-
53	6-7-12-	(9)-1-2-3-4-	3-1-
54	(12)-1-5-8-	(4)-5-	3-2r-
55	(8)-11-	1-2-3-6-	(2)-1-4-
56	(11)-2-4-9-	(6)-7-	(4)-5-
57	(9)-10-3r-12-	(7)-5-	(5)-6-
58	(12)-1-3r-2-	6-5-	(6)-
59	4-8-9-	(5)-7-	(6)-9-
60	(9)-11-	(7)-4-8-	(9)-
61	10-6-	(8)-3-	(9)- 1-7-
62	12-6-	(3)-9-	(7)-
63	(6)-11-9-	(9)-2-10-	(7)-2r-
64	(9)-10-	(10)-1-11-	8-
65	4-2-3r-1-7-	(11)-	(8)-
66	(7)-11-5-	(11)-1-2-3-	3-9-
67	(5)-3r-1-2-4r-9-	5-8-	(9)-
68	(9)-8-4-	(8)-7-	(9)-
69	12-9-	(7)-4-	4-
70	(9)-12-	9-	10-
71	(12)-4r-3-2-1-6	(9)-10-	(10)-

72	(6)-2-4 r -1-3-4-5-	(10)-1-2-3-	(10) -5-
73	(5)-12	(3)-12-	(5) -11-
74	8-1-2-3 r -5-	(12)-4-	(11) -
75	(5)-6-11	(4)-2-1-6-	(11) -
76	(11)-12-	(6)-1-4-1-	(11) -6-
77	4 r -11-12	8-	(6) -
78	(12)-3 r -1-4 r -	3-2-1-5-	12 -
79	(4)-2-3-4-2-1-6-	(5)-1-3-2-	(12) -
80	(6)-2-4 r -3-1-7-	(2)-6-8-	(12) -
81	(7)- 8-1-12-	(8)-5-	11 -
82	(12) -7-	(5)-4-	(11) -
83	(7) -2-11-6-	1-2-4-10-	(11) -10-
84	(6) -3-10-	(10)-	(10) -
85	(10) -5-4 r -9-	(10)-11-	(10) -
86	(9)-4-1-3-2-9-	(11)- 9 -	(10) -9-
87	(9)-10	(9) -4-	(9) -
88	(10)-6-7-8-	(4) -5-10-	(9) -7-
89	(8)-3 r -5-6-	(10) -	(7) -
90	(6)-1-4 r -8-	3 -6-	(7) -6-
91	(8)- 1 -4-7-10-	(6) -11-	(6) -8-
92	(10) -2-5-8-	(11) -2-7-	(8) -
93	(8) -5-1-4-	(7) -12-	(8) -5-
94	11 -2-5-	(12) -	(5)
95	(5) -8-11-	(12) -1-8-	1 -5-
96	(11) -3-6-9-	(8) -7-	(5) -4-
97	(9) -12-	(7)-6-1-	(4) -3-
98	(12) -8-12-	2-3-4-	(3) -2 r -1
99	(12)-10-	(4)-5-9-	2 r -3-
100	(10)-11-6-	(9)-1-	(3)-1-10-
101	(6) -5-4 r -3 r -2-	3-2-10-	(10)-
102	1 -8-9-	(10)-9-	(10)-
103	(9)- 1 -2-3-4-5-	(9)-	8-
104	(5) -6-7-8-	12-	(8)-
105	(8) -9-10-	(12)-3-1-	7-
106	(10) -12-	2-5-1-	(7)-3-
107	(12) -11	2-3-1-2-	(3)-1-5-
108	12-1-8-	4-1-3-	(5)-
109	(8)-10-12-	2-1-2-1-6-	3-1
110	(12)-11-	(6)-8-	2 r -1-3-
111	(11)-8-1-3 r -	(8)-4-	(3)-2 r -
112	(3)-9-	1-4-	1 -12-
113			(12) -
114			(12)
115			(12)

Focussing on the opening of the piece, the material in Ex. 6.8 and Fig. 6.5 shows that Messiaen aspires to state each division in its entirety (this is more easily ascertained by looking at the numbers in bold in Fig. 6.5). An examination of Ex. 6.9 below shows that division 1 unfolds with only one repetition of a pitch class (11: F). Messiaen mixes up the order so as to avoid the progressive deceleration mentioned above. Division 2 does unfold in the order 1 to 12 but there are more interruptions and this *de facto* deceleration is more nuanced. Division 3 states 10 unique pitches before any repetition but, unlike the other divisions, there is no specific order to its unfolding. Ex. 6.9 shows the twelve-tone unfolding within each division in the first eighteen bars of the piece. This can be read in conjunction with Fig. 6.5.

Ex. 6.9 *Mode de valeurs*: bb. 1–18 Unfolding of the Divisions

The musical score for Ex. 6.9, *Mode de valeurs*, bb. 1–18, illustrates the unfolding of three divisions. The notation uses numbered notes (1-12) to represent pitch classes, with some notes in parentheses indicating repetitions. The score is organized into three systems, each corresponding to a division.

Division 1 (Bars 1-5): The first system shows the unfolding of Division 1. The treble staff contains notes 1, 2, 3, 4, 6, 5, 7, 10, 11, 12, (11), and 8. The bass staff contains notes 1, 2, 3, 4, 5, (1), (2), (3), 6, 7, and 8. Below the bass staff, notes 9, 6, and 3 are indicated.

Division 2 (Bars 6-10): The second system shows the unfolding of Division 2. The treble staff contains notes 9, 12, 9, 4, 3, 5, 7, 10, (12), 1, 2, (3), and 8. The bass staff contains notes 9, (1), 10, 11, (1), (2), and (3). Below the bass staff, notes 4, 5, 1, 2, and 7 are indicated.

Division 3 (Bars 11-18): The third system shows the unfolding of Division 3. The treble staff contains notes (1), (2), (4), (7), (10), (12), (1), (2), (4), (5), (8), (9), and (11). The bass staff contains notes (10), 12, 1, 4, 5, (1), and 6. Below the bass staff, notes 8, 11, and (1) are indicated.

We know that there are only three possible complete unfoldings of division 3—marked by the tolling C-sharp—and the first full statement of division 3 can be observed in Fig. 6.5 (it takes twenty-eight bars for all twelve notes to be stated).

Occurrences of structured material (the use of permutations) are to be found at significant points throughout. Note 12 of division 3 (C-sharp) occurs just three times in the piece. Schweizer suggests that the C-sharps of division 3 divide the piece into three sections, the proportions of which are 3:5:4.³⁹ Even without a detailed pitch analysis, the aural effect of these three notes is very striking. The first two occurrences of C-sharp (note 12) in line 3 are interesting structurally and technically. The sounding of the first C-sharp in line 3, bar 28, coincides with two carefully structured permutations in lines 1 and 2 (these are marked in bold in Fig. 6.5). From bar 24 to 28 in line 1 Messiaen states the following permutation: 1 12 2 11 3 10 4 9 5 8 6 7. This is the first complete 12-tone arrangement/permutation of a division in the piece thus far. The C-sharp in line 3, which marks the end of the notational/theoretical first section, sounds one demisemiquaver after the permutation in line 1 is complete: in other words as soon as possible without both notes overlapping (see the arrow in Ex. 6.10). In line 2 there is an explicit accelerating motif from bar 24 to 27: 7-6-5-4-3-2-1 (although, it is doubtful that this will be perceived aurally given the interweaving of the divisions); this is part of an almost complete retrograde statement of division 2 (see the pitch analysis example below).⁴⁰ As the end of the permutation approaches in line 1, a greater sense of urgency is created in lines 2 and 3 with the use of the shortest (and loudest) notes of the divisions, thereby propelling the music to the climactic C-sharp. These features can all be seen in Ex. 6.10 (on the next page); the numbers in the example refer to a note's position (and by implication, its duration) within the divisions.

³⁹ See also: Toop, 'Messiaen/Goeyvaerts', p. 148. In using the word 'section', with the implication that something ends and something else begins, it should be emphasised that the music flows continuously. Schweizer suggests that the C-sharps of division 3 divide the piece in the ratio 3:5:4. The first C-sharp is struck after 27.5 bars; the second, a further 49.5 bars later; and the final, 34.25 bars after this. For the final C-sharp Schweizer gives the figure 37.5 to account for the note's duration until the piece ends, although this should really be 37.25, since in bar 115 the C-sharp only sounds for a quaver. Rounding these figures, using 9 as the common factor, gives Schweizer the proportions 3:5:4. See Schweizer, 'Olivier Messiaens Klavieretude', p. 139.

⁴⁰ This idea of an accelerating idea has its roots in the middle of the decade; see, for example, the *Vingt regards* – 'Regard de l'Onction terrible'. See also the bold numbers in Figure 6.5.

Ex. 6.10 *Mode de valeurs*: bb. 24–32 End of First ‘Section’

Intersion in Row 1

The musical score is written in 2/4 time and consists of three systems of staves. The first system has three staves: a treble staff, a bass staff, and a lower bass staff. The second system has three staves: a treble staff, a bass staff, and a lower bass staff. The third system has three staves: a treble staff, a bass staff, and a lower bass staff. The music features various dynamics (ppp, p, ff, f, mf, sff, sfff) and articulations (accents, slurs). Fingerings are indicated by numbers 1-5. Some notes are marked with '8va' or '8vb'.

System 1:

- Treble staff: Measures 24-25 (ppp, p), 26-27 (ppp, ff), 28-29 (ff, pp), 30-31 (f, ff).
- Bass staff: Measures 24-25 (p), 26-27 (p), 28-29 (pp), 30-31 (p).
- Lower bass staff: Measures 24-25 (mf), 26-27 (pp), 28-29 (p).

System 2:

- Treble staff: Measures 32-33 (mf, mf), 34-35 (ff), 36-37 (f, ppp), 38-39 (ff, ppp), 40-41 (p).
- Bass staff: Measures 32-33 (mf, mf), 34-35 (p), 36-37 (sff, mf, mf), 38-39 (p), 40-41 (sff, mf).
- Lower bass staff: Measures 32-33 (ff, ff), 34-35 (ff), 36-37 (sfff), 38-39 (p), 40-41 (p).

System 3:

- Treble staff: Measures 42-43 (pp), 44-45 (ppp, f), 46-47 (p), 48-49 (ff).
- Bass staff: Measures 42-43 (mf, f), 44-45 (f), 46-47 (f).
- Lower bass staff: Measures 42-43 (f), 44-45 (f), 46-47 (f).

Messiaen highlights the C-sharp of division 3 (bar 28) in the *Traité* and says that it is preceded by the shortest note of that division (E-flat). In addition, he mentions the pitches of line 2 (bb. 20–27), as the line is almost a complete retrograde of division 2 (notes 10 and 8 are omitted).⁴¹ A simplified pitch analysis (Ex. 6.11) shows the interaction of the permutations in divisions 1 and 2.

Ex. 6.11 *Mode de valeurs*: bb. 20–28 Permutations in Divisions 1 and 2

(end of 12-tone unfolding) 1 12-tone unfolding (beginning only)

20 9 10 11 12 2 3 4 5 6

Division 2 [12] [11] (Div 1:10) [9]

Division 1 [1] [12] [2] [11] [3] [10] [4] [9]

24 [7] (Div 1:8) [6] [5] [4]

27 [5] [8] [6] [7] Climactic C# div 3

[3] [2] [1]

During the sounding of the first C-sharp of division 3 (which lasts from bar 28 to 31), Messiaen introduces a permutation of division 2: from bar 29 to 38 line 2 states **1 2 3 12 11 10 5 4 6 9 8 7**. This is an inexact permutation, as notes 4 and 5 have their order switched (see Ex. 6.12). A glance at the score reveals that in bar 34 there is an A-flat sounding in division 3; as note 4 of division 2 is A-flat, Messiaen may have wanted to avoid the same pitch class sounding immediately after the termination of the A-flat in line 3. However, there are overlapping

⁴¹ *Traité*, III, p. 128. It is surprising that Messiaen does not highlight the effect of acceleration that is created in line 2, nor comment on the sense of deceleration that occurs simultaneously in line 3 (notes 3 4 5 1 2 1 12 of division 3). He does not even highlight the interversion in line 1, which is most curious, considering that in his analyses of the *Livre d'orgue* and *Chronochromie* he laboriously discusses every interversion. It is not an unfair criticism to say that his analysis of *Mode de valeurs* is far from insightful.

attacks in division 1, which would negate the effect of the repetition. In addition, there is no reason why Messiaen had to have the A-flat sounding in line 3 at this point; and there are other instances of pitch class repetition between divisions (which I will highlight later). Once this permutation of division 2 is completed, another inexact permutation starts immediately (see Ex. 6.12, bb. 39–49): 1 11 3 9 5 7 8 4 10 2 12 6

Ex. 6.12 *Mode de valeurs*: bb. 29–48

29 **12-tone unfolding** 1 2 3 4 5
Division 2 1 2 3 12 11 10

34 6 7 8 9 10 11 12 1 2 3 4 5 6 etc.
 5 4 6 9 8

38 **12-tone unfolding** 1 2
 7 **Division 2** 1 11 3 9 5

43 3 4 5 6 etc. **12-tone unfolding** 1 2 3 4 5 6 7
 7 8 4 10 2 12 6

The second occurrence of division 3's C-sharp is sounded from bar 78 to 80 and it is also marked by several structured twelve-tone permutations. The first of these is a permutation in line 3, starting in bar 61; this is the first and only true twelve-tone permutation of division 3: 1 7 2 8 3 9 4 10 5 11 6 12 (see the bold numbers in Fig. 6.5 and Ex. 6.13 below). This is a straightforward permutation involving reading alternate numbers from each hexachord in ascending order; once again, it is surprising that Messiaen does not refer to this in his analysis.

Because the rhythmic building block (the unit of division 3) is a quaver, this takes a very long time to unfold; in fact the total duration of an unfolding of division 3 is seventy-eight quavers ($1+2+3+ [...] +11+12$). It begins in the middle of bar 61 and culminates with the climactic C-sharp, which sounds from bar 78 to 80.

Ex. 6.13 *Mode de valeurs*: bb. 61–78 Line 3 Structured Permutation

12-tone unfoldings

61 10 11 12 1 2 3 4 5 6
Division 3 [1] [7] [2] [8]

66 7 8 9 10 11(B) 12 1 2 3 4 5 6 7
[3] [9] [4] [10]

71 8 9 10 11
[5] [11]

75 12 1 2 3 4 5 6 7 8 9 10
[6] [12]

During these bars (61–78), the material in lines 1 and 2 is relatively ‘free’ (as is also evidenced in Fig. 6.5) but this is merely the calm before the onslaught of permutations from bar 80 to 98. The C-sharp (bb. 78–80, line 3), which marked the end of the permutation, also doubles as the start of an inexact retrograde permutation of division 3. This takes place from bar 78 to 98 (see Fig. 6.5): 12-11-10-9-7-6-8-5-(1-5)-4-3-2-1.⁴² This means that from bar 61 to 98—a sizeable

⁴² Messiaen highlights this but does not note the dual function of the C-sharp. See *Traité*, III, p. 130.

portion of the piece—line 3 consists of structured twelve-tone permutations of the division. The music from bar 81 to 98 (Ex. 6.14) is by far the most complicated and sophisticated of the piece. As division 3 is stated in retrograde, Messiaen superimposes the following permutation of division 1 from bar 81: **8** 1 12 7 2 11 **6** 3 10 **5** 4 9. Messiaen's analysis of this permutation, and indeed several others in the piece, is most curious. Rather than producing the notes and their durations, which Messiaen does, it is more straightforward to use numbers. He starts with note 12: 12 7 2 11 **6** 3 10 **5** 4. The first line of the permutation reads 12-11-10, a retrograde motion; the second line reads 7-6-5, also a retrograde motion; and the third line reads 2-3-4, normal motion.⁴³ This all makes perfect sense, but it is strange that Messiaen omits notes 8, 1 and 9 because, as was demonstrated in the analysis above, the three-line permutation still works and makes use of all 12 notes.⁴⁴ From bar 86, with division 3 still unfolding its permutation, Messiaen superimposes the following permutation of division 2: **9** 4 5 **10** 3 6 **11** 2 7 **12** 1 8. Again, this can be straightforwardly read as a three-line permutation using a mixture of retrograde and normal motions, but in Messiaen's analysis he omits the first four notes (9-4-5-10) for no apparent reason.⁴⁵ Before this permutation is complete, Messiaen superimposes another permutation of division 1 starting at bar 91: **1** 4 7 10 **2** 5 8 11 **3** 6 9 12. Messiaen highlights this in his analysis saying that the material is 'permuted' 3 by 3 in three groups of four notes:⁴⁶ this can be followed by looking at the formatting of the numbers above. In actual fact, the permutation is not as straightforward in the score. The sequence of pitches is as follows: 1-4-7-10-(2-5-8-5-1-4-11)-2-5-8-11-3-6-9-12. Ignoring the numbers in parentheses, which interrupt/disrupt the permutation, gives the permutation as reproduced above.⁴⁷

This now means that from bar 91 to 95 all three lines are in structured permutations. The repetition of pitches in line 1 (see the additional numbers bracketed above, and the small bracketed numbers in Ex. 6.14) helps lengthen the length of time all three lines are in structured permutations.

⁴³ *Traité*, III, p. 129.

⁴⁴ Messiaen's analysis of bars 54 to 57 (line 1) and bars 90 to 95 (line 2) is similarly incomplete.

⁴⁵ *Traité*, III, p. 130.

⁴⁶ *Ibid.*, p. 129.

⁴⁷ Messiaen acknowledges that there are additional notes from the mode between the first and second four-note groups, but he gives no insight into why this is so.

Ex. 6.14 *Mode de valeurs*: bb. 81–98

Division 1 81 [8] [1] [12] [7] [2] [11] [6] [3] [10] [5] [4] [9]

bar 78-80 C-sharp 12 [11] Division 3 [10]

86 [9] Division 2 [4] [5] [10]

90 Division 1 [1] [4] [7] [10] [2] [5] [8] [5] [1] [4]

[3] [6] [11] [2] [7] [12]

[6] [8] [5]

94 [11] [2] [5] [8] [11] [3] [6] [9] [12]

[8 (D)] [1]

[1] [5 (F#)] [4] [3] [2] [1]

The end of the piece is marked by a single C-sharp in the bass (division 3's third and final statement of its twelfth note). In bar 112 lines 1 and 2 play notes 9 and 4 simultaneously. One semiquaver later the tolling C-sharp is played and thereafter no further activity takes place. Structured twelve-tone material does not immediately precede this event although, as Fig. 6.5 reveals, there is some dramatic activity in line 1 with a clear accelerating idea starting in bar 100. This leads to the only occurrence in the whole piece where one of the divisions almost unfolds in its entirety in the order 1 to 12 without interruption: this commences in line 1, bar 103. However, the order of the last two notes is switched (see Fig. 6.5 and Ex. 6.15). The most obvious reason for doing this is to avoid duplicating

the note F, which is sounding in line 2, bar 106, or to have an immediate repetition of the pitch class. But, there is no reason why Messiaen had to have an F sounding in line 2, bar 106, at this point. Unfortunately, Messiaen merely highlights this permutation and comments that the order of the two final notes is reversed.⁴⁸ It is therefore only possible to hypothesise what his thinking behind this ‘switch’ was. It could be argued that by obstinately avoiding a normal, full, twelve-tone statement of a division, Messiaen is trying to distance himself from the serial practices of Schoenberg and others: could it perhaps be an attempt to negate the serial aesthetic? If so, this marks a hardening of his stance since *Cantéyodjayâ* in which Messiaen did state each division in the order 1 to 8.

Ex. 6.15 *Mode de valeurs*: bb. 103–07 Normal Unfolding of Division 1

The image shows two staves of musical notation. The first staff, labeled '103' and 'Division 1', contains ten notes, each with a number in a box above it: 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10. The notes are: Bb4, Bb4, Ab4, Gb4, F4, E4, D4, C4, Bb3, and Ab3. The second staff, labeled '106', contains two notes with numbers in boxes above them: 12 and 11. The notes are: Gb3 and F3. An arrow points from the text '(Div 2: 11)' to the note Gb3 (labeled 12).

From this analysis, it would appear that a substantial part of *Mode de valeurs* is very highly organised, yet paradoxically (from the listener’s experience) much of it seems unorganised (perhaps even disorganised and chaotic). One of the reasons that the piece sounds free, improvised or unorganised is that most of the permutations are not experienced or perceived by the listener. In addition, several permutations take place over a long period and are surrounded by free material: with the possible exception of the few accelerating or decelerating permutations, there is no way for a listener to know or sense that something structured is happening. Most of the permutations are singular and they are usually surrounded by freer material in the other divisions; even when all three divisions are in simultaneous permutation (bb. 81–98) it is virtually impossible for the

⁴⁸ *Traité*, III, p. 129.

listener to perceive the structured material. Fig. 6.6 provides an overview of the piece; in particular, it reveals that there are very few bars where something unstructured is happening (this can also be ascertained by focussing on the boldface material in Fig. 6.5). The paradox is that any chance of sensing such structured material is thwarted by the apparent disorder that surrounds it.

Fig. 6.6 *Mode de valeurs*: Structural Summary

Bars 1–15	Establishes the three divisions and sees the complete unfolding of division 1 (by b. 6) and division 2 (by bb. 12–13). Bar 5 concludes the first statement of all twelve pitch classes and its final note (C-sharp) coincides with a stable triad. Division 3 states unique pitches without repetition (9 6 3 4 5 1 2 7 8 11) until pitch 1 is restated in bar 15.
Bars 15–18	Incomplete retrograde statement of division 1 [acceleration]
Bar 19	Free from ordered/structured material
Bars 20–27 24–28	Incomplete retrograde statement of division 2 [acceleration] Division 1 permutation: 1 12 2 11 3 10 4 9 5 8 6 7 Leads to climactic C-sharp of division 3
Bars 28–31 29–39 39–49	C-sharp of division 3 sounding Division 2 permutation: 1 2 3 12 11 10 5 4 6 9 8 7 leading to: Division 2 unstructured permutation: 1 11 3 9 5 7 8 4 10 2 12 6
Bars 49–52 52–53 53–57	Free from ordered/structured material but... Unique unfolding of all twelve pitch classes overlapping with... Division 1 permutation: 6 7 12 1 5 8 11 2 4 9 3 10
Bars 58–60	Free from ordered/structured material
Bars 61–78	Division 3 permutation: 1 7 2 8 3 9 4 10 5 11 6 12. This long permutation is surrounded by unordered material in divisions 1 and 2. Note 12 of division 3 is the second climactic C-sharp.
Bars 78–98 81–85 86–96 91–98	Division 3 inexact retrograde: 12 11 10 9 7 6 8 (5 1) 5 4 3 2 1 Division 1 permutation: 8 1 12 7 2 11 6 3 10 5 4 9 Division 2 permutation: 9 4 5 10 3 6 11 2 7 12 1 8 Division 1 permutation: 1 4 7 10 2 5 8 (5 1 4 11 2 5 8) 11 3 6 9 12
Bars 99–100	Free from ordered/structured material

Bars 101–102	Division 1 partial retrograde: 6 5 4 3 2 1
Bars 103–107	Division 1 original: 1 2 3 4 5 6 7 8 9 10 12 11 (end altered)
Bars 108–112	Free from ordered/structured material
Bars 112–115	Division 3: final C-sharp alone

The above summary gives the slightly misleading impression that all but a few bars are structured. It is worth reiterating that if there is only one permutation taking place, there is usually a lot of free material in the other divisions.

The summary in Fig. 6.6 permits the following overall assessment: *Mode de valeurs* begins with the unfolding of each division at speeds appropriate to their rhythmic building blocks: division 1 is completed by bar 6; division 2 by bar 12–13; and division 3 by bar 28. Divisions 1 and 2 essentially unfold in the order 1 to 12 (but with some pitch repetitions to avoid any serial connotation), but there is no discernible structure to the unfolding of division 3. The C-sharp of division 3, which is the most powerful note in the piece, marks the first statement of all twelve pitch classes of that division. Messiaen precedes this note with structured permutations in divisions 1 and 2. Whilst the C-sharp is still sounding, Messiaen states two new permutations of division 2 (one follows the other immediately) allowing freer unstructured material in the other two divisions. After these permutations there are several unstructured bars (although bb. 52–53 are unique in that they contain the only complete twelve-tone statement across all three division); there is further activity in bar 53 with a structured permutation in division 1. This is followed by a few more bars of unstructured material. Next is the epic permutation of division 3, which (taking some 18 to 20 bars to unfold) culminates in the second sounding of the low C-sharp. At this point the music becomes increasingly more organised: from bar 78 to 98 Messiaen gradually introduces permutations to all three divisions so that from bar 91 to 95 all three are in simultaneous permutation. It seems that the whole piece has been gradually building to this level of complexity. After this climax there is a brief return to unstructured material before a single permutation of division 1 in two guises from bars 100 to 102 and 103 to 107. The remaining bars are unstructured and Messiaen allows the final C-sharp to sound alone. Speaking of Messiaen's

recording of the piece, which is not without its issues (over-pedalling, for example), Hill says that of all Messiaen's recordings it is 'the one in which Messiaen as composer and Messiaen as performer seem most at odds.'⁴⁹ It would appear that the meticulous attention in the pre-composition and composition process is totally absent in the recording: 'Musically, Messiaen's agenda gives rise to a mosaic of strictly isolated sounds, which could mean anything or nothing—the cause, very likely of Messiaen's later dislike.'⁵⁰ Despite these critical observations, Hill acknowledges a sense of progression in Messiaen's performance:

The piece as a whole began to reveal a shape, with a sense of exposition at the opening as the 'modes' begin to unravel, and of a corresponding winding-down at the end, where the upper stave resumes its mode in the original order. [...] Meanwhile the interest in the central part of the piece lies in the incisive interplay between staves, especially where notes of similar dynamic come in quick succession.⁵¹

Despite these structural observations, much of the pitch material of the piece is unaccounted for (as can be seen from the Pitch Analysis table in Fig. 6.5). Richard Toop, in confronting this issue, attempts to surmise how the piece was composed. The order of pitches in line 1 at the beginning of the piece is 1-2-3-4-6-5. Line 2 begins 1-2-3-4-5, but note 1 is note 5 of division 1, i.e. 'G'. The out of place '6' in line 1 can now be accounted for: it is to avoid two Gs sounding in close succession⁵² (see Ex. 6.2). Similarly, Toop comments on the opening of line 3, which begins with note 9, 'B':

Clearly a long value is desirable to stress the sustaining function of the lower part, and lend stability to the initial impulse of the upper parts. 12 (C#), as we have seen is reserved for points of structural significance, 11 (B flat) would double three in the duplum (Line 2), 10 (E) would cause the same problem in the upper part (octave with 7). So 9 offers the best solution (7 and 8 = 4 and 5 of II, and are thus clearly out of the question).⁵³

Toop believes that the work can be analysed by taking this approach throughout the piece, although this would be an arduous task. It was mentioned earlier that I would rewrite the opening of the piece to show what would result if each division were to unfold in its entirety (Ex. 6.16). For variety, in my example, the

⁴⁹ Hill, 'Messiaen recorded', p. 87.

⁵⁰ Ibid., p. 88.

⁵¹ Hill, 'Messiaen Recorded', p. 89.

⁵² Toop, 'Messiaen/Goeyvaerts', p. 151.

⁵³ Ibid.

third line begins at the start of the second bar but (interestingly) even if it had commenced on the last quaver beat of bar 1, no unisons/octaves would occur.

Ex. 6.16 *Mode de Valeurs: Hypothetical Opening*⁵⁴

The close proximity of the G's in lines 1 and 2 (as noted by Toop) is evident but this is not necessarily a strong enough reason for switching pitches 5 and 6 in line 1 as there are several occurrences of notes of the same pitch class succeeding each other later in the piece. As mentioned earlier, Toop implied that Messiaen sought to avoid close repetitions of the same pitch class (by at least having a time interval of a crotchet between them). This is not the case: an examination of Ex. 6.4 yields at least four occasions when Messiaen repeats a pitch class immediately: (i) bb. 13–14: G; (ii) bb. 15–16: E-flat; (iii) b. 30: B-flat; (iv)

⁵⁴ To aid clarity, articulation and dynamics are omitted. Since the aim is to illustrate the complete unfolding of the divisions, it was only necessary to produce divisions 1 and 2 in their entirety. After division 1 is 'finished' it is free to draw on any notes from its division, obviously avoiding unisons/octaves. It was only necessary to produce division 3 to the point where division 2 was complete.

b.110: D.⁵⁵ There are also many more examples of ‘close’ repetitions of the same pitch class—even if the definition of ‘close’ in this context is restricted to an attack two notes later; again this can be verified by looking at Ex. 6.4.

From a musical point of view, what turns out to be most unsatisfactory in this hypothetical opening is the gradual loss of momentum in lines 2 and 3. In addition, these progressively elongating notes start to crowd in on one another: see, for example from bar 5, C-sharp (line 2) and C (line 3), then B (line 2) and A-flat (line 3), followed by F and F-sharp in lines 2 and 3 respectively. The other problem is the downward trajectory of the pitch in all three divisions, which contributes further to the sense of the piece grinding to a halt (before it has really got started).

Toop’s analysis of the opening (and the suggestion that the rest of the piece can be analysed in this manner) still begs the question as to which line(s) take priority. It is too problematic to conjecture that Messiaen worked solely with one line—for example line 1—because at the crucial structural points (C-sharp in line 3) Messiaen cannot use note 8 from Line 1 (nor note 9 from Line 2). If anything, given the longevity of the notes of the third division, it could be argued that the material of line 3 (at times) must have been written before the others. The most obvious example of this is from bar 61 to 95 where a twelve-tone permutation and an inexact retrograde are stated in line 3. It is obvious, therefore, that when there is a structured unfolding of a division present then the line in which this occurs takes priority and was written first. As the summary in Fig. 6.6 (above) showed, only fourteen of the 155 bars contain material that is not part of a structured permutation of a division (or divisions). Therefore, for over ninety per cent of the piece Messiaen must build material (and sometimes another permutation in another line) around the structured permutation(s).

Messiaen’s own assessment of the opening of the piece reveals very little about the composition process. He suggests that the piece begins with as near as possible an unfolding of each division. Once again, this proves to be slightly inaccurate. According to Messiaen, the second division unfolds from bar 1 to 9 but, in fact, its final note (12) does not make its first appearance until bar 13. There are similar problems with his assessment of the opening of the other lines

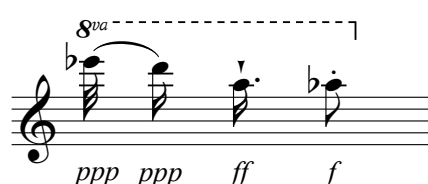
⁵⁵ Bars 13–14: G line 2 followed by G line 1; Bars 15–16: E-flat line 3 followed by E-flat line 2; Bar 30: B-flat line 2 followed by B-flat line 1; Bar 110: D line 3 followed by D line 2.

and he gives no insight into why the third line begins with note 9 of that division.⁵⁶ However, there is one aspect of the music that might provide some insight into Messiaen's method of composition: the use of motifs.

6.5.1 Motivic Considerations

Morag Grant says there is no 'sense' of motivic writing in *Mode de valeurs* because 'notes do not change their function, but simply recur'.⁵⁷ I would argue that there is some 'sense' of motivic writing precisely because notes recur. Toop acknowledges that Messiaen uses 'cohesive segments of each modal division'⁵⁸ but he misses the point about the potential for using such segments motivically by saying that dynamics and attacks are only secondary considerations for Messiaen (after pitch and rhythm).⁵⁹ It is through the use of dynamics and attacks that such motifs come into being.⁶⁰ Indeed, as mentioned in Chapter 1, the importance of determining timbre (orchestration) at the outset and integrating it fully into the composition process was an aspect that greatly interested Boulez. In my opinion there are four motifs that warrant further discussion. The first two notes of division 1 (E-flat and D) are slurred and marked *ppp*. If Messiaen wants to use one of these notes without the other, then he must abandon the mode of attack. E-flat to D occurs as a motif 16 times in the piece, but the first four notes of division 1 (E-flat – D – A – A-flat) occur in various formations (retrograde, for example, or with one note missing) a total of twenty-seven times.

Ex. 6.17 *Mode de Valeurs*: Division 1 Notes 1–4



⁵⁶ *Traité*, III, p. 128. In this section Messiaen is outlining the first thirteen bars of the piece. He explains that from bars 1 to 4 the first division unfolds almost in its original order, but, as he is talking about the opening thirteen bars, why not show the points where divisions 1 and 2 reach their final pitch, particularly since bar 13 marks the end of the first complete unfolding of division 2, and bar 6 marks the end of the first unfolding of division 1?

⁵⁷ Morag J. Grant, *Serial Music, Serial Aesthetics*, p. 63.

⁵⁸ Toop, 'Messiaen/Goeyvaerts', p. 151.

⁵⁹ *Ibid.*, p. 147.

⁶⁰ This angle of research was aroused by Kate Covington's article, referred to earlier.

This motif is extremely important and prevalent. It is pitch class set 4-9 [0, 1, 6, 7] (in Forte's labelling) and it will be recalled that this set was the complement of division 2 of *Cantéyodjayâ*. Its interval class [200022] contains 2 semitones, two perfect fourths and two augmented fourths. An examination of Fig. 6.7 below reveals most occurrences of notes 1 to 4 occur with each other. The numbers in italics and bold typeface are instances where one (or two) of the four pitches are isolated. This is not really an issue for pitches 3 and 4, as their articulations are detached, but occurrences are nevertheless highlighted in the table. Some of the pitch isolations are accounted for by being part of a structured unfolding (these are shaded in the table).

Fig. 6.7 Motivic Analysis of Division 1: 1-2-3-4

Bar		Bar		Bar	
1	1-2-3r-4r-6-	39	10- 2 -12-	77	4r -11-12
2	5-7-10-	40	(12)-7- 1-	78	(12)- 3r-1-4r-
3	(10)-11-	41	2 -12-6-	79	(4)-2-3-4-2-1-6-
4	(11)-12-11-	42	(6)-5-7-	80	(6)- 2-4r-3-1-7-
5	(11)-8-	43	8-9-	81	(7)- 8-I-12-
6	9-12-	44	(9)-11- 3r -6-	82	(12)-7-
7	(12)-9-4r-	45	(6)-7-8-	83	(7)-2-11-6-
8	(4)-3r -5-7	46	(8)-10-11-	84	(6)-3-10-
9	(7)-10-12	47	(11)-12-	85	(10)-5-4r-9-
10	(12)- 1-2-3r -8-	48	(12)- 1-2-4 -5-	86	(9)- 4-1-3-2 -9-
11	(8)- 1-2-4 -7-	49	(5)-8-7-	87	(9)-10
12	(7)-10-12-	50	11-12-	88	(10)-6-7-8-
13	(12)- 1-2-4-	51	(12)-8-6-	89	(8)- 3r -5-6-
14	5-8-9-	52	(6)-11-	90	(6)- 1-4r -8-
15	(9)- 12-	53	6-7-12-	91	(8)- 1-4-7-10-
16	(12)-11-10-	54	(12)-I-5-8-	92	(10)-2-5-8-
17	(10)-9-	55	(8)-11-	93	(8)-5-1-4-
18	5-4r-3-2-1-7-	56	(11)-2-4-9-	94	11-2-5-
19	(7)-3r -5-8-	57	(9)-10-3r -12-	95	(5)-8-11-
20	(8)-10-	58	(12)- 1-3r-2-	96	(11)-3-6-9-
21	12-11-	59	4 -8-9-	97	(9)-12-
22	(11)- 1-3r-1 -8-	60	(9)-11-	98	(12) -8-12-
23	(8)-12-	61	10-6-	99	(12)-10-
24	I-12-2-11-	62	12-6-	100	(10)-11-6-
25	(11)-3r -10-	63	(6)-11-9-	101	(6)-5- 4r-3r-2-
26	(10)-4r -9-	64	(9)-10-	102	1 -8-9-
27	(9)-5-8-	65	4-2-3r-1 -7-	103	(9)- 1-2-3-4-5-

28	(8)-6-7- 2-	66	(7)-11-5-	104	(5)-6-7-8-
29	9- 1-2- 12-	67	(5)- 3r-1-2-4r- 9-	105	(8)-9-10-
30	(12)-10-	68	(9)-8- 4-	106	(10)-12-
31	(10)- 1-2-4r- 12-	69	12-9-	107	(12)-11
32	(12)-11-	70	(9)-12-	108	12- 1- 8-
33	10-5-6-	71	(12)- 4r-3-2-1- 6	109	(8)-10-12-
34	(6)-7-9-	72	(6)- 2-4r-1-3-4- 5-	110	(12)-11-
35	(9)-8- 1-2-	73	(5)-12	111	(11)-8- 1-3r-
36	1- 11- 3r- 9-	74	8- 1-2-3r- 5-	112	(3)-9-
37	(9)-5-7-	75	(5)-6-11	113	
38	(7)-8- 4-	76	(11)-12-	114	
				115	

A similar analysis of division 2 reveals that notes 2 and 3 (C and B-flat) occur as a unit 17 times out of a total number of appearances of 25 and 21 respectively.

Ex. 6.18 *Mode de Valeurs*: Division 2 Notes 2–3, 4–5, 6–8



Once again, as each note has an attack/articulation that is dependent on the other, occurrences of one note without the other result in a different attack being deployed. These notes are highlighted in Fig. 6.8 and, as in the previous table, permutations are shaded; isolated notes are in italics and bold typeface. There are a total of eight isolated occurrences of note 2, and four isolated occurrences of note 3.

Fig. 6.8 Motivic Analysis of Division 2: 2_3

Bar		Bar		Bar	
1	1-2-3-	39	(7)-1-11-	77	8-
2	4-5-	40	(11)-	78	3-2- 1-5-
3	(5)-1- 2-3-6-	41	3-9-	79	(5)-1- 3-2-
4	(6)-7-	42	(9)-5-	80	(2)-6-8-
5	(7)-8-	43	(5)-7-	81	(8)-5-
6	(8)-9-	44	8-	82	(5)-4-
7	(9)-1-10-	45	4-10-	83	1- 2- 4-10-

8	(10)-	46	(10)-2-	84	(10)-
9	11-	47	12-	85	(10)-11-
10	(11)-1-2-3-	48	(12)-6-	86	(11)-9-
11	(3)-10-	49	(6)-4-1-2-	87	(9)-4-
12	(10)-12-	50	(2)-3-1-4-	88	(4)-5-10-
13	(12)- 1-	51	(4)-1-5-1-	89	(10)-
14	4-5-	52	9-	90	3-6-
15	(5)-1-6-	53	(9)-1-2-3-4-	91	(6)-11-
16	7-8-	54	(4)-5-	92	(11)-2-7-
17	(8)-9-	55	1-2-3-6-	93	(7)-12-
18	(9)-	56	(6)-7-	94	(12)-
19	4-8-	57	(7)-5-	95	(12)-1-8-
20	(8)-12-	58	6-5-	96	(8)-7-
21	(12)-	59	(5)-7-	97	(7)-6-1-
22	11-	60	(7)-4-8-	98	2-3-4-
23	(11)-9-	61	(8)-3-	99	(4)-5-9-
24	(9)-7-	62	(3)-9-	100	(9)-1-
25	(7)-6-	63	(9)-2-10-	101	3-2-10-
26	(6)-5-4-	64	(10)-1-11-	102	(10)-9-
27	(4)-3-2-1-	65	(11)-	103	(9)-
28	4-1-2-3-	66	(11)-1-2-3-	104	12-
29	(3)-4-1-2-	67	5-8-	105	(12)-3-1-
30	(2)-3-12-	68	(8)-7-	106	2-5-1-
31	(12)-	69	(7)-4-	107	2-3-1-2-
32	11-	70	9-	108	4-1-3-
33	(11)-10-	71	(9)-10-	109	2-1-2-1-6-
34	(10)-5-	72	(10)-1-2-3-	110	(6)-8-
35	(5)-4-6-	73	(3)-12-	111	(8)-4-
36	(6)-9-	74	(12)-4-	112	1-4-
37	(9)-8-	75	(4)-2-1-6-	113	
38	(8)-7-	76	(6)-1-4-1-	114	
				115	

This thematic or motivic analytical approach also holds for the slurred notes in division 2: 4–5 and 6–7–8 (notice that they also share a common dynamic—*p* (one *pp*)) (see Ex. 6.18, above). Messiaen is also able to cross from 4_5 to 6_7_8 (and vice versa) as they share the same articulation (see for example bars 57 to 61 in Fig. 6.10 below). A detailed examination of this division illustrates this motivic approach (see Fig. 6.9 below.) Notes 4 and 5 are slightly more flexible than notes 6 to 8, given their shorter duration and the fact they occur more frequently. Notes 6 to 8, with the exception of one permutation and one rogue appearance of note 8 (bar 73), are always to be found in conjunction with other slurred notes. It is clear, therefore, that the use of dynamics and articulation

influenced how Messiaen approached the deployment of division 2's material: the approach is clearly motivic.

Fig. 6.9 Division 2: Occurrences of 4–5 & 6–7–8

Bar	
[1]	(1 2 3) <u>4_5</u> (1 2 3) <u>6_7_8</u> . . .
[13]	(1) <u>4_5</u> (1) <u>6_7_8</u> . . .
[19]	<u>4</u> _____ <u>8</u> . . .
[24]	<u>7_6</u> <u>5_4</u> (3 2 1) <u>4</u> (1 2 3) <u>4</u>
[29]	*(1 2 3) (12 11 10) <u>5_4_6</u> (9) <u>8_7</u> **
[39]	*(1 11 3 9) <u>5_7_8_4</u> (10 2 12) <u>6_**_4</u> (1) . . .
[50]	(1) <u>4</u> (1) <u>5</u> (1 9)
[53]	(1 2 3) <u>4_5</u> (1 2 3) <u>6_7_5</u>
[58]	* <u>6_5_7_4_8</u> (3 9 2 10 1 11) (incomplete-12 missing)**
[66]	(1 2 3) <u>5_8_7_4</u> (9 10 1 2 3)
[73]	(12) <u>4</u> (2 1) <u>6</u> (1) <u>4</u> (1) <u>8</u> (3 2 1) <u>5</u>
[79]	(1 3 2) <u>6_8_5_4</u> (1 2) <u>4</u> (10 11)
[87]	*(9) <u>4_5</u> (10 3) <u>6</u> (11 2) <u>7</u> (12 1) <u>8_**_7_6</u>
[97]	(1 2 3) <u>4_5</u> (9) . . .
[105]	(3 1 2) <u>5</u> (1 2 3 1 2) <u>4</u> (1 3 2)
[109]	(1 2 1) <u>6_8_4</u> (1) <u>4</u>

Notes:

The underscore indicates slurring. Occurrences of any of the pitches 4 to 8 without the underscore indicate that this articulation is absent. This is not a complete pitch analysis of line 2: omitted notes are indicated by ‘. . .’ Significant 12-tone permutations are contained between the asterisks (*=start; **=end).

Pitch 4: 8 of its 22 occurrences are not slurred and these are always in conjunction with notes 1, 2 or 3.

Pitch 5: 5 of its 15 occurrences are not slurred and these are always in conjunction with notes 1 or 2 (preceding or proceeding). The exception is in bar 26 where 5 to 4 is not slurred. There is no obvious reason for this and it could simply be an oversight by Messiaen.

Pitches 6 and 7: there is only one occurrence of each of these notes without slurring, which is as a result of the permutation in bar 87.

Pitch 8: 1 of its 11 occurrences is not slurred (bar 73) and this is in conjunction with notes 1 and 3.

Fig. 6.10 below shows 4–5 and 6–7–8 within the context of line 2. Again, the shading indicates the presence of structured material; isolated notes are in italics and bold typeface. From bar 56 to 61 the so-called isolate notes still function as a motif because they all share the same articulation.

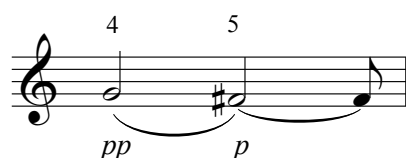
Fig. 6.10 Motivic Analysis Division 2: 4_5 & 6_7_8

Bar		Bar		Bar	
1	1-2-3-	39	(7)-1-11-	77	8-
2	4-5-	40	(11)-	78	3-2-1-5-
3	(5)-1-2-3-6-	41	3-9-	79	(5)-1-3-2-
4	(6)-7-	42	(9)-5-	80	(2)-6-8-
5	(7)-8-	43	(5)-7-	81	(8)-5-
6	(8)-9-	44	8-	82	(5)-4-
7	(9)-1-10-	45	4-10-	83	1-2-4-10-
8	(10)-	46	(10)-2-	84	(10)-
9	11-	47	12-	85	(10)-11-
10	(11)-1-2-3-	48	(12)-6-	86	(11)-9-
11	(3)-10-	49	(6)-4-1-2-	87	9-4-
12	(10)-12-	50	(2)-3-1-4-	88	(4)-5-10-
13	(12)-1-	51	(4)-1-5-1-	89	(10)-
14	4-5-	52	9-	90	3-6-
15	(5)-1-6-	53	(9)-1-2-3-4-	91	(6)-11-
16	7-8-	54	(4)-5-	92	(11)-2-7-
17	(8)-9-	55	1-2-3-6-	93	(7)-12-
18	(9)-	56	(6)-7-	94	(12)-
19	4-8-	57	(7)-5-	95	(12)-1-8-
20	(8)-12-	58	6-5-	96	(8)-7-
21	(12)-	59	(5)-7-	97	(7)-6-1-
22	11-	60	(7)-4-8-	98	2-3-4-
23	(11)-9-	61	(8)-3-	99	(4)-5-9-
24	(9)-7-	62	(3)-9-	100	(9)-1-
25	(7)-6-	63	(9)-2-10-	101	3-2-10-
26	(6)-5-4-	64	(10)-1-11-	102	(10)-9-
27	(4)-3-2-1-	65	(11)-	103	(9)-
28	4-1-2-3-	66	(11)-1-2-3-	104	12-
29	(3)-4-1-2-	67	5-8-	105	(12)-3-1-
30	(2)-3-12-	68	(8)-7-	106	2-5-1-
31	(12)-	69	(7)-4-	107	2-3-1-2-
32	11-	70	9-	108	4-1-3-
33	(11)-10-	71	(9)-10-	109	2-1-2-1-6-
34	(10)-5-	72	(10)-1-2-3-	110	(6)-8-
35	(5)-4-6-	73	(3)-12-	111	(8)-4-
36	(6)-9-	74	(12)-4-	112	1-4-
37	(9)-8-	75	(4)-2-1-6-	113	
38	(8)-7-	76	(6)-1-4-1-	114	
				115	

In division 3, notes 4 and 5 (G and F-sharp) are slurred, marked *p* and *pp*, and occur more times together as a motif than they do in isolation from one

another—they appear together six times out of a total of eight and ten notes respectively.

Ex. 6.19 *Mode de Valeurs*: Division 3 Notes 4–5



Isolated occurrences are accounted for in the long permutations from bar 61 to 98. This leaves just one isolated note 4 and two isolate note 5's. There is potentially more work to do in this area but at present it is beyond the scope of this dissertation. One of the most obvious parallels that this gives rise to is Webern's approach in the second movement of the Op.27 Variations for piano (discussed earlier).

Fig. 6.11 Motivic Analysis Division 3: 4_5

Bar		Bar		Bar		Bar	
1	9-	30	(12)-	59	(6)-9-	88	(9)-7-
2	(9)-	31	(12)-6-	60	(9)-	89	(7)-
3	(9)-	32	(6)-	61	(9)-1-7-	90	(7)-6-
4	6-	33	7-	62	(7)-	91	(6)-8-
5	(6)-3-	34	(7)-9-	63	(7)-2r-	92	(8)-
6	(3)-4-	35	(9)-	64	8-	93	(8)-5-
7	(4)-5-	36	(9)-	65	(8)-	94	(5)
8	(5)-1-2r-	37	1-3-	66	3-9-	95	1-5-
9	(2)-7-	38	4-	67	(9)-	96	(5)-4-
10	(7)-	39	2r-6-	68	(9)-	97	(4)-3-
11	8-	40	(6)-	69	4-	98	(3)-2r-1
12	(8)-	41	7-	70	10-	99	2r-3-
13	11-	42	(7)-1-	71	(10)-	100	(3)-1-10-
14	(11)-	43	2r-11-	72	(10)-5-	101	(10)-
15	(11)-1-	44	(11)-	73	(5)-11-	102	(10)-
16	4-	45	(11)-	74	(11)-	103	8-
17	5-	46	(11)-5-	75	(11)-	104	(8)-
18	(5)-6-	47	(5)-4-	76	(11)-6-	105	7-
19	(6)-1-	48	(4)-3-	77	(6)-	106	(7)-3-
20	5-	49	(3)-2r-1-	78	12-	107	(3)-1-5-
21	(5)-1-2r-	50	3-1-	79	(12)-	108	(5)-
22	10-	51	6-	80	(12)-	109	3-1

23	(10)-	52	(6)-2r-	81	11-	110	2r-1-3-
24	(10)-3-	53	3-1-	82	(11)-	111	(3)-2r-
25	(3)-4-	54	3-2r-	83	(11)-10-	112	1-12-
26	(4)-5-	55	(2)-1-4-	84	(10)-	113	(12)-
27	(5)-1-2r-	56	(4)-5-	85	(10)-	114	(12)
28	(2)-1-12-	57	(5)-6-	86	(10)-9-	115	(12)
29	(12)-	58	(6)-	87	(9)-		

6.6 Concluding Comments

It could be suggested that the notion of working with small units from the various divisions presages the concept of neumes, more fully explored in the *étude*, *Neumes rythmiques*. Indeed, Paul Griffiths's discussion of *Cantéyodjayâ* also alludes to presence of short motivic ideas/neumes.⁶¹ The duration of the piece is worthy of a brief observation. There are 114 bars—each of which lasts for a minim (or two crotchet beats)—plus one final quaver in bar 115. The duration is therefore 228.5 crotchet beats, which is best expressed as 457 quavers—a prime number.⁶² Given Messiaen's penchant for prime numbers, this is unlikely to be coincidental. Such an approach belongs to the structural dimensions of many Messiaen compositions of the 1930s and 1940s and the governance of prime numbers will resurface in *Neumes rythmiques*. This number will also prove extremely significant in *Île de feu 2*, to be discussed in the next chapter.

⁶¹ Griffiths, *Olivier Messiaen*, p. 146.

⁶² Schweizer incorrectly arrives at the figure 288.5. See Schweizer, p. 136.

CHAPTER SEVEN

Quatre études de rythme

Île de feu 1, Île de feu 2, Neumes rythmiques

7.1 Introduction

Having touched on the various compositional approaches adopted by Messiaen in *Mode de valeurs* (which, despite some structured writing, gave rise to a piece of music that exudes a quasi-improvisatory quality), this chapter will focus on the remaining three *études* in which Messiaen strives for even tighter organisation of his material. This is not to suggest that every aspect of the other *études* is infused with rigorous pre-compositional techniques. In fact, Ann Ghandar goes so far as to suggest that the other *études* ‘reaffirm the priorities outlined by him [Messiaen] in *The Technique of my musical language*’.¹ There is definitely a mixture of the old and the new: once again Messiaen seems to be looking forwards and backwards at the same time. *Neumes rythmiques* was the next *étude* to be written (during Messiaen’s sojourn in Tanglewood) but this chapter will begin by examining *Île de feu 1* and *2*. *Île de feu 2* is the more radical of the two because it consolidates techniques that appeared in embryonic form in *Mode de valeurs*.

7.2 *Île de feu 1 and 2*

Île de feu 1 and *2* were the last of the *Quatre études* to be written and were composed in Paris in the winter of 1949–50. Musically the pieces live up to their title—Island of Fire—but it is the second, in particular, which is of interest to this thesis given that several sections employ twelve-tone writing. In essence this *étude* consists of an opening theme that undergoes several variations, which are

¹ Ann Ghandar, ‘The Deforming Prism: Messiaen’s *Four Studies in Rhythm*’, in *Oliver Messiaen: The Centenary Papers*, ed. by Judith Crispin (Newcastle: Cambridge Scholars Publishing, 2010), pp. 110–21 (p. 115). This short chapter on Messiaen’s *Quatre études* does not go beyond a superficial discussion of the pieces. It also makes erroneous gross generalisations. For example, when discussing *Mode de valeurs*, Ghandar makes the following statement: ‘It is not surprising that Messiaen wrote only one piece using “total serialism” throughout.’ (p. 115). Ghandar also views these works solely through the ‘prism’ of Messiaen’s first treatise and there seems to be no awareness of any scholarship on the works. Her most perceptive observation is the suggestion that in composing the ‘Four studies’ Messiaen was ‘writing another treatise, but this time it was purely a practical demonstration of musical techniques.’ (p. 120).

interspersed with interversions² and other twelve-tone material. *Île de feu 1* follows a similar pattern—that of a theme which undergoes variation—but without recourse to rigid twelve-tone writing. Messiaen’s analysis of these pieces in the *Traité* essentially details their sectional structure. In his introduction to *Île de feu 2* Messiaen speaks of the people of Papua and their differing cultural background:

Their philosophy (which is a magic organization of the world), their initiations, their secret societies, their racial identification with the animals or the plants from which they are nourished, contain astonishing ideas, which do not go without terrible violence. It is this violence that attracted me and which is given free rein in my two “Île de feu”, especially the second!³

The focus here will be on *Île de feu 2* but its counterpart merits a few observations.

Messiaen begins his discussion on *Île de feu 1* by focussing on the accompaniment, which is a repeating three-note cluster (A-Bb-B) hammered out in the lowest register of the piano. He highlights aspects of non-retrogradability, a Hindu rhythm and the use of prime numbers.⁴ All of these features have antecedents in pieces from earlier in this decade. Within this accompaniment Messiaen’s fascination with antecedent and consequent, arsis and thesis, is evident. This is an area of research that he explored in greater detail in *Neumes rythmiques* and in its analysis in the *Traité*. Messiaen does not draw attention to the fact that the total duration of the main theme of *Île de feu 1* is forty-one semiquavers, a prime number; this is a number that is significant in *Neumes rythmiques*, to be discussed later. Another obvious link with *Neumes rythmiques* is that the accompaniment cluster (A-Bb-B) appears here also. The opening three notes of the theme that dominates *Île de feu 1* (Ex. 7.1A) have the same rhythm and contour as the main theme of *Île de feu 2* (Ex. 7.1B), further cementing the relationship between the two pieces and giving the whole work (*Quatre études*) a cyclic feeling, since a standard performance begins with *Île de feu 1* and concludes with *Île de feu 2*.

² For the purpose of this thesis, the term ‘intversion’ is best translated as ‘permutation’. Its formal translation is referred to in Section 7.2.1.

³ ‘Leur philosophie (qui est une organisation magique du monde), leurs initiations, leurs sociétés secrètes, leur identification racial aux animaux ou aux plantes dont ils se nourrissent, contiennent des idées étonnantes, lesquelles ne vont pas sans de terribles violences. C’est cette violence qui m’a séduit et qui se donne libre cours dans mes deux « îles de feu », surtout la seconde !’, *Traité*, III, p. 165.

⁴ *Traité*, III, p. 123.

Ex. 7.1A *Île de feu 1*: Theme



Ex. 7.1B *Île de feu 2*: Theme



One of the sections of *Île de feu 1* also has a counterpart in *Île de feu 2*, which will be highlighted in the relevant discussion of the later study (see Section 7.2.3). Finally, in terms of Messiaen's approach to variation or development (a technique that Leibowitz and others thought was poor in Messiaen's music), it is worth noting that the main themes of both studies undergo very little changes in themselves. In *Île de feu 1*, Messiaen's interest lies in what the theme is surrounded by, be that birdsong, inferior or superior resonances, or a truncating of the cluster idea by introducing rests.

Messiaen's rather perfunctory analysis of *Île de feu 2* in the *Traité* divides the piece into eleven sections.⁵ Indeed, the juxtaposition of ideas/sections in this piece recalls earlier works (such as *Cantéyodjayâ*) and is in stark contrast to the ceaseless flow of *Mode de valeurs*. Despite a fresh approach to writing with all twelve tones, Messiaen has difficulty in integrating his new compositional technique into a coherent structure. Below is an overview of the structure of the piece:

- Section 1: Theme
- Section 2: Interversions (1 & 2 together, followed by 3 & 4 together)
- Section 3: Theme (variation)
- Section 4: Interversions (5 & 6 together, followed by 7 & 8 together)
- Section 5: Theme (variation)
- Section 6: *Encore un peu moins vif* (free material)
- Section 7: *Vif* (new interventions)
- Section 8: Theme played with Interventions 9 & 10

⁵ Ibid., pp. 168–70.

Section 9: Theme (variation)

Section 10: *Vif* (toccata)

Section 11: *Un peu moins vif* (Theme variation)

What follows below is not a comprehensive analysis of the entire piece; rather, it concentrates on those sections that are based on twelve-tone writing. The most important technique developed by Messiaen in this piece is an alternative (non-serial) approach to generating or creating additional twelve-tone ‘rows’ from an original twelve-tone row through the technique of interversions. Faint traces of this technique were seen in *Mode de valeurs*, but in *Île de feu 2* its latent possibilities are fully manifested. Before looking at how this technique is applied in *Île de feu 2*, it is important to have an understanding of the theory.

7.2.1 *Permutation/Interversion Theory*

The concept of arranging twelve numbers (or pitches/durations and so on) by applying a mathematical ordering made several appearances in *Mode de valeurs*. In *Île de feu 2* Messiaen methodically explores the technique of permutation in a manner that offers an alternative arrangement of twelve ‘items’ to the traditional serial approach of inversion, retrograde and their various transpositions. Permutation is defined as ‘an ordered arrangement or grouping of a set of numbers, items, etc.’⁶ In the context of *Île de feu 2* this involves arranging and rearranging the order of a set of pitches and, by implication, durations, since Messiaen continues to align pitch with duration. In his discussion on the topic in the *Traité*, Messiaen initially uses the phrase ‘Permutations symétriques’⁷ before eventually settling for the term ‘Interversion’. The French word (interversion) translates as ‘inversion, transposition, reversal’⁸ Messiaen’s interversion technique usually involves reading a set of numbers (pitches/durations) from the middle outwards or from the extremities to the centre—the latter was seen in *Mode de valeurs* (see the material in line 1 of Ex. 6.10). Messiaen is then able to create a new arrangement of the series by applying the same reading order to the resulting permutation; in other words, each subsequent interversion is derived from the previous interversion using the same procedure. The technique produces a finite number of ‘new (derived) rows’ before the original row is reached

⁶ *The Oxford English Reference Dictionary*, 2nd edn, (1996), p. 1081.

⁷ *Traité*, III, p. 7.

⁸ *Harrap French Shorter Dictionary*, 6th edn, (2000), p. 507.

again—an obvious parallel with the Modes of Limited Transposition and the ‘Charm of Impossibilities’. Messiaen devotes an inordinate amount of time to discussing interversions in Volume III of his *Traité de Rythme*.⁹ For example, he comments that the total number of ways of arranging twelve numbers is 479,001,600¹⁰ so, obviously, some system is needed to reduce this to a more manageable amount. A simple example using four letters illustrates the point:¹¹

A B C D [1 2 3 4]

The total number of unique arrangements is 24 (4! (factorial), which is 4 x 3 x 2 x 1). Applying a permutation technique to the numbers will dramatically reduce the number of arrangements. Reading from the centre to the extremes using the permutation 3 2 4 1 (a retrograde motion) gives:

C B D A

Messiaen rennumbers this 1 2 3 4 and performs the same permutation operation [3 2 4 1], which gives:

D B A C

Performing the reordering [3 2 1 4] again gives rise to the original series:

A B C D

Now, instead of twenty-four possible arrangements of A B C D, there are only three.¹² The reason that there are three rather than four unique arrangements is because the second unit (letter B) occupies position 2 and is effectively stuck there (this will be discussed in more detail below). Messiaen goes on to discuss interversions of series with twelve and thirty-two durations respectively. His ordering of twelve numbers/durations gives rise to five unique arrangements before the original returns; his ordering of thirty-two numbers/durations (using a much more complicated method of reading) generates thirty-six distinct interversions.¹³ What is absent from Messiaen’s analysis is a detailed theoretical understanding of why one method of permutation generates a vastly different number of interversions to another method. Messiaen lists the thirty-six rhythms that arise from the permutation of thirty-two values. In addition he then

⁹ *Traité*, III, p. 10ff.

¹⁰ This number is 12! (12 factorial: 12x11x10x9...x2x1).

¹¹ An initial series A B C D, numbered 1 2 3 4, will be used. When a new arrangement is created the series is rennumbered 1 to 4 so that the same reading formula can be reapplied.

¹² *Traité*, III, pp. 11–12.

¹³ *Ibid.*, pp. 12–15

illustrates all the rhythms again by superimposing them, three on three.¹⁴ This occupies a substantial portion of the *Traité* and, since all these rhythms have already been listed, it feels rather excessive to labour through the whole process again. Surely an illustration of the first 3 x 3 superimposition would have sufficed? (Messiaen can, perhaps, be excused such an indulgence because this method of permutation of thirty-two values reappears in *Chronochromie* and *Couleurs de la Cité céleste*.)¹⁵

In a 1991 article on serialism and permutation techniques in Messiaen's *Livre d'orgue*, Eleanor Trawick examines the theory of interversions. Drawing on Messiaen,¹⁶ she describes reading from the centre outwards as an Open Fan, and reading from the extremities to the centre as Closed Fan.¹⁷ In addition, reading left to right (normal) yields very different results to reading right to left (retrograde). In order to clarify the terminology, reading left to right (normal) will be assumed unless a fan is described as retrograde. It is also important to understand that the term 'retrograde' in this context describes a retrograde motion using the fan mechanism (that is reading right to left), and not simply the retrograde of the row, which produces a completely different result.¹⁸

Ex. 7.2 below shows the chromatic row used in *Île de feu 2* to generate the main interversion theme. Messiaen gives each note a unique duration (from twelve to one semiquavers) and one of five dynamic markings and four articulations/attacks—no articulation marking (normal) is also an articulation. This approach is analogous to that in *Mode de valeurs*. The numbering of notes from '1 to 12' and '12 to 1' in the original chromatic row may initially give rise to some confusion. Messiaen clarifies this in the *Traité* by saying that the duration series is arranged from the longest to the shortest notes, which results in a sequence of numbers from twelve to one. He describes how this is in opposition to the pitch series, which is numbered from one to twelve: '[...]

¹⁴ Ibid., pp. 39–66.

¹⁵ The presence of interversions 13, 14 and 15 in *Couleurs de la Cité céleste* is difficult to follow, even though Messiaen marks them in the score reproduced in the *Traité*, III, pp. 67–72.

¹⁶ See Messiaen's notes to the first movement of the *Livre d'Orgue*—'Reprises par Interverision'.

¹⁷ Eleanor Trawick, 'Serialism and Permutation Techniques in Olivier Messiaen's *Livre d'orgue*', *Music Research Forum*, 6 (1991), 15–35 (p. 17).

¹⁸ See the footnote to Fig. 7.2.

making a sort of a divorce of their marriage, the notes move chromatically in *ascending* order, and the durations move chromatically in *descending* order.’¹⁹

Ex. 7.2 *Île de feu 2*: 12-tone Row with all Possible Fan Operations

Île de feu 2 - (Original Chromatic Row)

Note Duration

Note Position

Closed Fan (Reading Note Position Left to Right: 1 12 2 11 etc.) Interversions 1 & 2

Open Fan (Reading Note Position Left to Right: 6 7 5 8 4 9 etc.) Interventions 1 & 2

Closed Fan Retrograde (Reading Note Position Right to Left: 12 1 11 2 10 3 etc.) Interventions 1 & 2

Messiaen's Choice in *Île de feu 2*

Open Fan Retrograde (Reading Note Position Right to Left: 7 6 8 5 9 4 etc.) Interventions 1 & 2

¹⁹ Messiaen, *Traité*, III, p. 167.

In his illustration of all the interversions in *Île de feu 2*, Messiaen works from the duration series. This means that the first interversion (which is based on the Open Fan Retrograde) reads as 7 6 8 5 9 4 10 3 11 2 12 1. This formula will subsequently generate the other interversions. Since each duration is assigned a unique pitch, and this relationship remains fixed throughout the permutation process, it is more convenient to show the processes at work by reproducing the resulting pitch series. The numbers beneath the notes in the interversions in Ex. 7.2 represent a note's duration and not its position within the row. Only the first two interversions of each possible fan action are shown here. The arrows reinforce how the interversions work.

Beneath the original chromatic row are the four possible types of permutational ordering: Closed Fan, Open Fan, Closed Fan Retrograde, and Open Fan Retrograde. Reading left to right (normal) is slightly problematic because in the Closed Fan operation the first note will always remain in that position (12), and in the Open Fan operation the last note will always remain in that position (1). (See the boxed notes in Ex 7.2 and the bold typeface in Fig. 7.1 below, which reproduces all the possible interversions).

Fig. 7.1 Intversions using the Fan Operation (Normal)

A. Closed Fan (Reading Note Position: 1 12 2 11 3 10 4 9 5 8 6 7)

Note Position	1	2	3	4	5	6	7	8	9	10	11	12
Chromatic row	12	11	10	9	8	7	6	5	4	3	2	1
Intversion 1	12	1	11	2	10	3	9	4	8	5	7	6
Int. 2	12	6	1	7	11	5	2	8	19	4	3	9
Int. 3	12	9	6	3	1	4	7	19	11	8	5	2
Int. 4	12	2	9	5	6	8	3	11	1	10	4	7
Int. 5	12	7	2	4	9	10	5	1	6	11	8	3
Int. 6	12	3	7	8	2	11	4	6	9	1	10	5
Int. 7	12	5	3	10	7	1	8	9	2	6	11	4
Int. 8	12	4	5	11	3	6	10	2	7	9	1	8
Int. 1	12	8	4	1	5	9	11	7	3	2	6	10
Int. 10	12	10	8	6	4	2	1	3	5	7	9	11
Int. 11 = chromatic row	12	11	10	9	8	7	6	5	4	3	2	1

B. Open Fan (Reading Note Position: 6 7 5 8 4 9 3 10 2 11 1 12)

Note Position	1	2	3	4	5	6	7	8	9	10	11	12
Chromatic row	12	11	10	9	8	7	6	5	4	3	2	1
Intervention 1	7	6	8	5	9	4	10	3	11	2	12	1
Int. 2	4	10	9	3	5	11	8	2	6	12	7	1
Int. 3	11	8	5	2	3	6	9	12	10	7	4	1
Int. 4	6	9	3	12	2	10	5	7	8	4	11	1
Int. 5	10	5	2	7	12	8	3	4	9	11	6	1
Int. 6	8	3	12	4	7	9	2	11	5	6	10	1
Int. 7	9	2	7	11	4	5	12	6	3	10	8	1
Int. 8	5	12	4	6	11	3	7	10	2	8	9	1
Int. 9	3	7	11	10	6	2	4	8	12	9	5	1
Int. 10	2	4	6	8	10	12	11	9	7	5	3	1
Int. 11 = chromatic row	12	11	10	9	8	7	6	5	4	3	2	1

Although not noting these fixed positions as a problem *per se*, Eleanor Trawick clarifies why there are only eleven possible versions (the final interventions in italics above reproduce the chromatic row): since either the first or last number remains fixed, there are only 11 remaining numbers to undergo permutation, ‘each member occupying successively each of the remaining eleven positions in the series [...]’²⁰

Reading right to left (retrograde) does not result in a fixed position for the first or last integers, although, as can be seen in Fig. 7.2 below and the boxed notes in Ex. 7.2 above, two numbers/notes interchange throughout—3 and 8 (positions 5 and 10) in the Closed Fan, and 5 and 10 (positions 3 and 8) in the Open Fan.

²⁰ Trawick, pp. 19–20. Trawick also discusses the similarities and differences between the fan of a row and the fan of its retrograde. This would simply mean carrying out the same operation shown above on a row numbered 1 2 3 . . . 12. There is no need to go into this in detail here but see the next footnote, and Trawick, pp. 21–24.

Fig. 7.2 Interversions using the Fan Operation (Retrograde)

A. Closed Fan Retrograde²¹ (Reading Note Position: 12 1 11 2 10 3 9 4 8 5 7 6)

Note Position	1	2	3	4	5	6	7	8	9	10	11	12
Chromatic Row	12	11	10	9	8	7	6	5	4	3	2	1
Intervention 1	1	12	2	11	3	10	4	9	5	8	6	7
Int. 2	7	1	6	12	8	2	5	11	9	3	4	10
Int. 3	10	7	4	1	3	6	9	12	11	8	5	2
Int. 4	2	10	5	7	8	4	11	1	12	3	9	6
Int. 5	6	2	9	10	3	5	12	7	1	8	11	4
Int. 6	4	6	11	2	8	9	1	10	7	3	12	5
Int. 7	5	4	12	6	3	11	7	2	10	8	1	9
Int. 8	9	5	1	4	8	12	10	6	2	3	7	11
Int. 9	11	9	7	5	3	1	2	4	6	8	10	12
Int. 10 = chromatic row	12	11	10	9	8	7	6	5	4	3	2	1

B. Open Fan Retrograde (Reading Note Position: 7 6 8 5 9 4 10 3 11 2 12 1)

Note Position	1	2	3	4	5	6	7	8	9	10	11	12
Chromatic Row	12	11	10	9	8	7	6	5	4	3	2	1
Intervention 1	6	7	5	8	4	9	3	10	2	11	1	12
Int. 2	3	9	10	4	2	8	11	5	1	7	12	6
Int. 3	11	8	5	2	1	4	7	10	12	9	6	3
Int. 4	7	4	10	1	12	2	9	5	6	8	3	11
Int. 5	9	2	5	12	6	1	8	10	3	4	11	7
Int. 6	8	1	10	6	3	12	4	5	11	2	7	9
Int. 7	4	12	5	3	11	6	2	10	7	1	9	8
Int. 8	2	6	10	11	7	3	1	5	9	12	8	4
Int. 9	1	3	5	7	9	11	12	10	8	6	4	2
Int. 10 = chromatic row	12	11	10	9	8	7	6	5	4	3	2	1

Trawick does not discuss the difference between reading normal and retrograde, although she very briefly refers to interversions that are identical under retrograde reading.²² Her argument can be followed by examining the boxed rows in Figs. 7.1 and 7.2: the first intervention of the Open Fan (see the boxed row in Fig. 7.1B) is the retrograde of the first intervention of the Closed Fan Retrograde (see the boxed row in Fig. 7.2A). By extension, the first intervention of the Open Fan Retrograde (see the boxed row in Fig. 7.2B) is identical to the

²¹ It was mentioned earlier that the retrograde of a fanned intervention is not the same as a retrograde fan action. Take, for example, the first intervention from the Closed Fan in Fig. 7.1: 12 1 11 2 10 3 9 4 8 5 7 6. Its retrograde is 6 7 5 8 4 9 3 10 2 11 1 12. This is different to the Closed Fan Retrograde in Fig. 7.2—7 6 8 5 9 4 10 3 11 2 12 1. At this stage the difference is small: every group of two numbers is simply switched around but, as the interventions progress, the differences would become more pronounced.

²² Trawick, p. 19.

retrograde of the first interversion of the Closed Fan (see the boxed row in Fig. 7.1A).²³

Although at this point in her article Trawick is discussing the theory of permutation techniques in general, her comment quoted above about the fan operation resulting in eleven versions of a row (including the original) does not hold for retrograde operations. This seems to be a slight oversight on her part. In the Closed Fan Retrograde, positions 5 and 10—units 3 and 8 in Fig. 7.2—alternate. This means that there are only ten possible positions for the other ten units to be placed. Each of these ten appears once in every location excluding positions 5 and 10 (to apply Trawick’s phraseology from earlier). The same is true of the Open Fan Retrograde, although in this instance it is positions 3 and 8—units 5 and 10 in Fig. 7.2—that alternate with each other.²⁴ Although two pitches/durations have semi-fixed positions in the series, the aural effect is much less noticeable than the effect produced when reading left to right, where either the first or last position remains fixed. And, although reading retrograde yields only ten rows (including the original), the absence of notes in fixed positions 1 or 12 makes this the more interesting choice. This is Messiaen’s approach in *Île de feu 2*: specifically, he uses the Open Fan Retrograde [this is highlighted in Ex. 7.2]. An alternative reading of permutation/interversion theory will be put forward in Section 7.2.2.1.

7.2.2 Interventions in *Île de feu 2*

A link with *Mode de valeurs* was briefly mentioned above (namely the use of fixed parameters) but the texture in *Île de feu 2* is dramatically different: two interventions are stated simultaneously in octaves in clearly defined sections. Ex. 7.3 reproduces interventions 1 and 2 as they appear in the score (without dynamics and articulation); interventions 3 and 4 follow immediately but are not included in the music example. It probably goes without saying that if the

²³ Trawick’s relating of one permutation to the retrograde of another is slightly confusing. The confusion arises from the use of the word ‘retrograde’ as noted earlier. It is undisputed that two interventions can be related by retrogradation; the crucial factor is that subsequent interventions derived from these cannot be related by retrogradation. Here there is a clear distinction between the retrograde of a row and the use of a retrograde fan operation. Trawick fails to make such a distinction.

²⁴ The reason that the ‘note’ and ‘note position’ numbers do not match is because the row is numbered from 12 to 1; this is not a discrepancy: in a row numbered 1 to 12 the ‘note’ and ‘note position’ numbers would be identical.

interversions start at the same time, they will end at exactly the same time: as mentioned in *Mode de valeurs* the total sum of all digits from one through to twelve is seventy-eight.

Ex. 7.3 Interversions 1 and 2 in *Île de feu 2*

The musical score for Ex. 7.3 consists of two systems of piano music. The first system shows 'Intersion 1' in the upper staff and 'Intersion 2' in the lower staff. The second system continues the musical material. Notes are marked with numbers in boxes, representing a sequence of twelve semitones. The key signature is one sharp (F#) and the time signature is 2/4.

The climax of *Île de feu 2* begins at the bottom of page 6 where the final interversions (9 and 10) are played with the main theme. From an analytical point of view, the six bars preceding the climax (Section 7: *Vif*) provide a further example of intricate pre-composition. Each hand in each bar states all twelve semitones, but not in a serial manner. At first glance, the twelve rows look independent of each other—the tell-tale signs of serialism (transposition, inversion and their retrogrades) are clearly absent—but, on closer inspection, these bars are also based on the principle of interversions. Given the huge amount of time devoted to discussing interversions, Messiaen’s analysis of these bars is, at best, disproportionately concise and, at worst, unsatisfactorily vague:

Page 6, 3rd bar: a transitional passage, based on new interversions (notes only): 12 ‘limited symmetrical re-interversions’, on 12 chromatic notes, - superimposed 2 by 2, until the return of the original chromatic scale.²⁵

²⁵ ‘Page 6, 3e mesure: passage transitoire, établi sur de nouvelles interversions (*de sons seulement*): 12 “réinterversions symétriques limitées”, sur 12 sons chromatiques, - interversions superposées 2 à 2, jusqu’au retour à la gamme chromatique de départ.’ *Traité*, III, p. 168.

Numbering a chromatic row (C to B) one to twelve and applying numbers to the right hand of the third bar on page 6 (the start of Section 7: *Vif*) gives the following numerical series: 6 11 5 8 2 9 3 10 4 12 1 7. This then becomes the formula for generating subsequent interversions:

Fig. 7.3 Interversions in Section 7: *Vif* (page 6)

Intervention 1	6	11	5	8	2	9	3	10	4	12	1	7
2	9	1	2	10	11	4	5	12	8	7	6	3
3	4	6	11	12	1	8	2	7	10	3	9	5
4	8	9	1	7	6	10	11	3	12	5	4	2
5	10	4	6	3	9	12	1	5	7	2	8	11
6	12	8	9	5	4	7	6	2	3	11	10	1
7	7	10	4	2	8	4	9	11	5	1	12	6
8	3	12	8	11	10	5	4	1	2	6	7	9
9	5	7	10	1	12	2	8	6	11	9	3	4
10	2	3	12	6	7	11	10	9	1	4	5	8
11	11	5	7	9	3	1	12	4	6	8	2	10
12	1	2	3	4	5	6	7	8	9	10	11	12
Duplicates 1	6	<i>11</i>	5	8	2	9	3	<i>10</i>	4	<i>12</i>	1	7

Since no number in the interversion formula occupies its corresponding number position in a series numbered one to twelve, it might be expected that each number will appear once in every position resulting in a total of twelve rows. This is indeed what results but only because of careful note-mapping/pairing. (Note-mapping (or note-pairing), as an alternative method for understanding Messiaen's interversion technique, will be discussed in more detail after the analysis of the *Vif* section.) To give an example of note-mapping, the numbers in bold in Fig. 7.3 show that the number '1' always generates the number '6'. In Ex. 7.4 (below) the last bar of *Vif* section has been reproduced separately at the start of the excerpt. The downward arrows indicate how notes are mapped/paired; for example, B-flat is always mapped onto C, and C is always mapped onto F, and so on. If the left hand's ascending chromatic sequence is taken as a starting point, applying the same note relationships maps C onto F and D-flat onto B-flat, and so on (see '1' and '2' in the extracted (and first) bars of Ex. 7.4). By following this process through, the pitch material of the first bar (proper) labelled as RH1 is generated. This, in turn, generates LH1, which generates RH2, and so on. By the end of bar 6 the cycle is complete; to continue would simply reproduce bar 1: RH1 and LH1. The fact that working out subsequent rows using note-

mapping/pairing gives the same result as following the intervention formula proves that both techniques are analogous.

Ex. 7.4 Interversions/Note-mapping in the *Vif* section

The image displays a musical score for piano, consisting of four systems of staves. Each system shows a right-hand (RH) and left-hand (LH) part. Arrows indicate mappings between different parts across systems, labeled with box numbers (RH1, LH1, etc.).

- System 1:** RH6 and LH6 are labeled. Arrows point from RH6 to RH1 and from LH6 to LH1.
- System 2:** RH1 and LH1 are labeled. Arrows point from RH1 to RH2 and from LH1 to LH2.
- System 3:** RH2 and LH2 are labeled. Arrows point from RH2 to RH3 and from LH2 to LH3.
- System 4:** RH3 and LH3 are labeled. Arrows point from RH3 to RH4 and from LH3 to LH4.
- System 5:** RH4 and LH4 are labeled. Arrows point from RH4 to RH5 and from LH4 to LH5.
- System 6:** RH5 and LH5 are labeled. Arrows point from RH5 to RH6 and from LH5 to LH6.
- System 7:** RH6 and LH6 are labeled. An arrow points from RH6 to RH1.

7.2.2.1 NOTE-MAPPING AND INTERVERSIONS

In the *Vif* section, twelve unique rows were created. A pre-requisite for guaranteeing twelve unique rows is that no number can occupy its corresponding number in the series. We have already seen how the number of rows is reduced when either a number gets stuck in one position (see Fig. 7.1) or two numbers alternate with each other (see Fig. 7.2). However, not having any number occupying its corresponding position in the permutation is no guarantee that twelve unique rows will be created. Fig. 7.4 shows two permutations of virtually

identical rows (two numbers have been swapped), and in each permutation no number occupies its corresponding position in the series.

Fig. 7.4 Intversions of Two Slightly Different Rows²⁶

A.

Note Position	1	2	3	4	5	6	7	8	9	10	11	12
Intervention 1	<u>3</u>	<u>5</u>	10	1	7	9	12	4	11	<u>6</u>	2	8
2	10	7	6	3	12	11	8	1	2	9	5	4
3	6	12	9	10	8	2	4	3	5	11	7	1
4	9	8	11	6	4	5	1	10	7	2	12	3
5	11	4	2	9	1	7	3	6	12	5	8	10
6	2	1	5	11	3	12	10	9	8	7	4	6
7	5	3	7	2	10	8	6	11	4	12	1	9
8	7	10	12	5	6	4	9	2	1	8	3	11
9	12	6	8	7	9	1	11	5	3	4	10	2
10	8	9	4	12	11	3	2	7	10	1	6	5
11	4	11	1	8	2	10	5	12	6	3	9	7
12	1	2	3	4	5	6	7	8	9	10	11	12
Duplicates 1	3	5	10	1	7	9	12	4	11	6	2	8

B.

Note Position	1	2	3	4	5	6	7	8	9	10	11	12
Intervention 1	3	<u>6</u>	10	1	7	<u>9</u>	12	4	<u>11</u>	<u>5</u>	2	8
2	10	9	5	3	12	11	8	1	2	7	6	4
3	5	11	7	10	8	2	4	3	6	12	9	1
4	7	2	12	5	4	6	1	10	9	8	11	3
5	12	6	8	7	1	9	3	5	11	4	2	10
6	8	9	4	12	3	11	10	7	2	1	6	5
7	4	11	1	8	10	2	5	12	6	3	9	7
8	1	2	3	4	5	6	7	8	9	10	11	12
Duplicates 1	3	6	10	1	7	9	12	4	11	5	2	8

The results are radically different; but why does the second approach only generate eight unique rows? Two virtually identical intervention formulae were devised: the only difference between them is that in the second formula the numbers 5 and 6, which occupied positions 2 and 10 respectively, have been switched (these numbers are underlined in intervention 1 of each table). To truly understand why this has such dramatic consequences, it is necessary to realise the circularity of intervention technique insofar as notes are mapped onto one another.

²⁶ Intervention 1 represents the formula in each case.

Reading the permutation formula (interversion 1) from the first table (Fig. 7.4A), the number 3 generates the number 10; the number 5 generates the number 7; the number 10 generates the number 6, and so on. Therefore, 10 appears under every occurrence of the number 3, and 6, in turn, appears under every occurrence of the number 10. Starting again, and following this procedure through, results in the following:

Note	is mapped onto	Note
3		10
10		6
6		9
9		11
11		2
2		5
5		7
7		12
12		8
8		4
4		1
1		3
3		10

The circle is now complete.

The above schematic shows that each number is mapped onto a new (unique) number (and all twelve are used). Returning to the *Vif* section, the note mapping is as follows: 6—9—4—8—10—12—7—3—5—2—11—1. Again, because each number is mapped onto a new number, all twelve numbers are present. In fact, this pattern of mapping can be seen in all the columns of Fig. 7.3.

In Fig. 7.4A I have highlighted how the note-mapping permeates all the columns (see the boxed notes), by arbitrarily starting with the number '3'. In the second example below (reading from the table in Fig. 7.4B), the closure of the circle happens much more quickly. By starting with '6', the problem soon becomes apparent:

Note	is mapped onto	Note
6		9
9		11
11		2
2		6
6		9

The circle is now complete.

Because the number 6 returns after only four mappings, it means that these four numbers are in a continuous loop (see the boxed notes in Fig. 7.4B) and never make it into the other columns. By starting with any number other than the four above, it can be observed that these four remain outside the other loop. In other words, they are excluded from the note-mapping of the other eight numbers; the remaining numbers repeat after eight mappings, as shown in the schematic below. The least or lowest common multiple of four and eight is eight; this is why it only takes eight statements for the original series to return.

Note	is mapped onto	note
10		5
5		7
7		12
12		8
8		4
4		1
1		3
3		10
10		5

And the circle is now complete.

In all the examples of interventions above, the series ‘1 to 12’ or ‘12 to 1’ always arose. Was this just a coincidence or will the chromatic series always appear? The answer (it would appear) is yes because the return of the original intervention formula is always preceded by the chromatic series. Consider the following permutation formula: 4 1 **3** 7 11 2 6 12 8 **10** 5 9. Two digits (3 and 10) occupy their corresponding note position, which might lead to the conclusion that only ten unique rows will be created. However, when the note-mapping is worked out the following arises:

4—7—6—2—1—**4** (5 digits in a loop)
 11—5—**11** (2 digits in a loop)
 12—9—8—**12** (3 digits in a loop)
 3—**3**
 10—**10**

The total number of interventions can be worked out by calculating the lowest common multiple of 5, 2, 3, and 1. This means that there will be thirty

unique interversions before the original series returns. Fig. 7.5 shows the working out of the process; as expected, the chromatic series (1 to 12) appears as the final interversion (number 30) before the return of the original permutation.

Fig. 7.5 Interversions of 4 1 3 7 11 2 6 12 8 10 5 9

1.	4	1	3	7	11	2	6	12	8	10	5	9
2.	7	4	3	6	5	1	2	9	12	10	11	8
3.	6	7	3	2	11	4	1	8	9	10	5	12
4.	2	6	3	1	5	7	4	12	8	10	11	9
5.	1	2	3	4	11	6	7	9	12	10	5	8
6.	4	1	3	7	5	2	6	8	9	10	11	12
7.	7	4	3	6	11	1	2	12	8	10	5	9
8.	6	7	3	2	5	4	1	9	12	10	11	8
9.	2	6	3	1	11	7	4	8	9	10	5	12
10.	1	2	3	4	5	6	7	12	8	10	11	9
11.	4	1	3	7	11	2	6	9	12	10	5	8
12.	7	4	3	6	5	1	2	8	9	10	11	12
13.	6	7	3	2	11	4	1	12	8	10	5	9
14.	2	6	3	1	5	7	4	9	12	10	11	8
15.	1	2	3	4	11	6	7	8	9	10	5	12
16.	4	1	3	7	5	2	6	12	8	10	11	9
17.	7	4	3	6	5	1	2	9	12	10	5	8
18.	6	7	3	2	11	4	1	8	9	10	11	12
19.	2	6	3	1	5	7	4	12	8	10	5	9
20.	1	2	3	4	11	6	7	9	12	10	11	8
21.	4	1	3	7	5	2	6	8	9	10	5	12
22.	7	4	3	6	5	1	2	12	8	10	11	9
23.	6	7	3	2	11	4	1	9	12	10	5	8
24.	2	6	3	1	5	7	4	8	9	10	11	12
25.	1	2	3	4	11	6	7	12	8	10	5	9
26.	4	1	3	7	5	2	6	9	12	10	11	8
27.	7	4	3	6	11	1	2	8	9	10	5	12
28.	6	7	3	2	5	4	1	12	8	10	11	9
29.	2	6	3	1	11	7	4	9	12	10	5	8
30.	1	2	3	4	5	6	7	8	9	10	11	12
	4	1	3	7	11	2	6	12	8	10	5	9

The above example shows how note-mapping (or note-pairing) is at the centre of truly understanding Messiaen's interversion technique. Determining the individual loops or circularities in advance is a useful method for calculating the number of unique permutations that will arise. The advantage of this is that it is not necessary to write out all the permutations before deciding whether or not a particular formula will generate sufficient results. The resulting permutations are predetermined, but it is impossible for the composer to anticipate the results. It is surprising that Messiaen does not adequately highlight any of these aspects in his

discussions in the *Traité*. The note-mapping is more obvious in *Vif* section of *Île de feu 2* because all the notes are semiquavers. In the case of the other interventions in this piece (discussed earlier), such a note-for-note correspondence still exists, but it is less blatant because of the displacements caused by each note's unique duration (see Ex. 7.3).

7.2.3 Other Twelve-tone Writing in 'Île de feu 2'

The relevance of the excerpts discussed thus far is that each of them uses all twelve tones. It is clear that Messiaen is directly addressing some of the issues of traditional serialism, but in his typically unique way. The penultimate section of this piece also makes use of twelve-tone rows, though once again this term is not meant in a serial sense. Section 10 (as defined in Messiaen's analysis in the *Traité*), which starts on the second line of page 8, consists of a relentless semiquaver passage in which the right hand plays in a free toccata style (based on the 'jâtis', *naishâdi*, *ândhrî*, and *nandayanti*)²⁷ and is accompanied by a series of twelve-tone rows in the left hand. This section has a strong connection with the fifth section of *Île de feu 1*, which highlights the subtle (and not so subtle) links that are to be found between the pieces. In *Île de feu 1* the right hand plays in an improvisatory manner (again with repeated notes and based on 'jâtis') and the left hand provides a melodic counterpoint to it.²⁸ Messiaen draws the reader's attention to the fact that the material in the right hand (of *Île de feu 1*) is based on a mode of twelve pitches²⁹ but because of the preponderance of repeated notes it is very difficult to sense this in the music. The process of working with all twelve tones is much more organised and obvious in the left hand of the penultimate section of *Île de feu 2*; an analysis of this material reveals some intriguing results.

Rather than simply presenting a series of ten twelve-tone rows, Messiaen creates a mammoth pitch cycle that at all levels is governed by prime numbers. Ex. 7.5 recreates the first half (plus the first bar of the second half) of the left hand's material in this section. The first principle is that each row is immediately followed by its retrograde. The boxed numbers indicate the start of each row; the

²⁷ Johnson, *Messiaen*, p. 110.

²⁸ Messiaen suggests that the theme in the left hand is new, but it is clearly a development of the main theme on which the whole piece is based: both start with an E rising to a G-sharp before returning to the E. The openings are also rhythmically similar. *Traité*, III, p. 124.

²⁹ *Traité*, III, p. 125.

downward arrows indicate the point of symmetry where the row is stated in retrograde. The effect of the point of symmetry (that is, the last note of the row doubling as the first of the retrograde, thereby avoiding the immediate repetition of a note) is to generate a statement of twenty-three pitches, which is a prime number. Messiaen's analysis of this section is disappointing. He describes this 'contrapuntal' material as 'a succession of diverse interversions, with no bond between them, but always followed by their retrograde (eliminating the repetition of notes)'.³⁰

Ex. 7.5 *Île de feu* 2: Section 10 Left Hand 'Palindromic Toccata'³¹

The musical score consists of 21 measures of music in bass clef. Measures 1 through 10 represent the forward chromatic row, and measures 11 through 20 represent the retrograde. Measure 21 is an overlap of the last note of the retrograde and the first note of the next row. Downward arrows indicate the point of symmetry at the end of each row. A double-headed arrow at the bottom indicates the total pitch content.

1st Section: $230 - 1 = 229$ (Prime Number)

2nd Section: 229 (Prime Number) $- 1 = 228$

Total Pitch Content: $229 + 228 = 457$ (Prime Number)

³⁰ '[...] une succession d'interversions diverses sur 12 sons chromatiques, n'ayant aucun lien entre elles, mais toujours suivies de leur rétrogradation (en supprimant les répétitions de sons) [...]', *Traité*, III, p. 169.

³¹ This is my descriptive term.

It seems incredible for Messiaen to describe eliminating the repeated pitch and not to consider the resulting symmetry, or the fact that the number of pitches in the row combined with its retrograde is a prime number. Why also describe the rows as ‘a succession of diverse interversions’ when the term ‘intversion’ has usually been applied to rows that are related to one another? No such relationship exists here; these are simply random, unstructured, twelve-tone rows (although, see below for some brief comments on the structure of the rows). It is easy to prove that the twelve-tone rows are not related because there is no note-mapping. For example, the first note of row 1 (A) would be mapped onto the first note of row 2 (F). In row 2, A is the fifth note, which means the fifth note of row 3 should be F, whereas in fact it is E-flat.

With ten twelve-tone statements each retrograded about the final note, a total of 230 notes would be expected. This is not the case because, at the end of the third twelve-tone row, Messiaen allows the final note of the retrograde to double as the first note of the fourth twelve-tone statement; in other words, the rows overlap. This is highlighted in Ex. 7.5 where the boxed number ‘4’ appears at the end of bar 6 rather than at the beginning of bar 7. This means that the total number of pitches resulting from the ten twelve-tone rows is 229, another prime number. On the final semiquaver of the penultimate bar in Ex. 7.5 (which marks the end of the tenth row’s retrograde) Messiaen begins the process of stating the entire passage backwards using the final note ‘F’ as the point of symmetry (only the first bar of this process is shown in the example).³² In theory, the retrograde also contains 229 notes but, since its first note doubles as the final note of the first half, only 228 more notes are required. This gives a total pitch content of (229+228=) 457 notes, yet another prime number.³³ By a remarkable coincidence this is the same number that governs the duration of *Mode de valeurs*, although in that case the quaver (rather than the semiquaver) is the basic rhythmic unit. Is this a coincidence? We will probably never know. In Messiaen’s analysis of this section he only highlights the point at which the whole process is stated in retrograde and does not draw any conclusions about the result. This overt display of a structure based on prime numbers clearly harks back to earlier works and, as

³² The ‘savage dance’ (Messiaen’s description) in the right hand above this line is not retrograded.

³³ This prime number is also the sum of three consecutive prime numbers: 149, 151 and 157.

mentioned in the section on *Mode de valeurs*, will be seen again in *Neumes rythmiques*, which predates *Île de feu 2*.

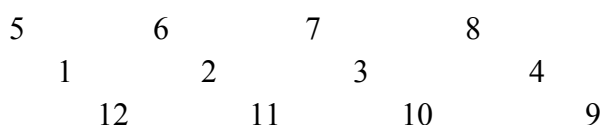
7.2.3.1 ANALYSIS OF THE TWELVE-TONE ROWS IN SECTION 10 OF *ÎLE DE FEU 2*

Messiaen's choice of ten rows is significant, and surely not coincidental, given that the main 'intversion' theme is limited to ten statements. But here the relationship ends because the twelve-tone rows in this section are not related to each other; more specifically, unlike the interversions already discussed, the rows in Section 10 do not generate each other. An examination of how each row is structured shows that each of the first three rows has a discernible pitch pattern but thereafter the interest lies in the general contour/shape of the row, as rigid mathematical formulae are absent. Each row is confined to an octave range F to E, so for the purpose of analysis this twelve-tone chromatic row will be numbered 1 to 12, where 1=F and E=12.

Ex. 7.6 *Île de feu 2*: Section 10 Row 1



This is clearly structured around trichords with the first two notes rising a semitone on each subsequent statement and the third note falling a semitone; this creates an overall effect of a closing fan. Messiaen would describe this as an interversion in 3 lines: two ascending in step and one descending in step. The chromatic movement of the lines can be followed in the schematic below:³⁴



Ex. 7.7 *Île de feu 2*: Section 10 Row 2



³⁴ This notational approach is borrowed from Johnson, *Messiaen*, p. 108.

This row is structured around tetrachords, with the second and third tetrachords an exact transposition of the first. The first leaps three semitones before filling in the notes jumped:

1 5 9
 4 8 12
 2 6 10
 3 7 11

Ex. 7.8 *Île de feu 2*: Section 10 Row 3



A mathematically rigid approach is absent from this row but it has the ethos, once again, of a closing fan starting with notes 12 and 1 and ending in the middle on notes 6 and 7:

12 1 3 10 9 5 6 7
 11 2 4 8

Ex. 7.9 *Île de feu 2*: Section 10 Row 4



This begins with a sweeping descent (12-11-7-5-1) before ascending to 10 via a mixture of tones and semitones.

Ex. 7.10 *Île de feu 2*: Section 10 Row 5



This twelve-tone arrangement is interesting as it duplicates the inversion formula of the *Vif* section discussed earlier (see Ex. 7.4 and Fig. 7.3)—these pitches are therefore a direct transposition [t(5) (a perfect fourth)] of the earlier material.

Ex. 7.11 *Île de feu* 2: Section 10 Row 6



In this permutation Messiaen works by alternating groups of pitches from both hexachords. Always starting with the second hexachord (notes 7–12), Messiaen collates groups of three pitches: 10-12-11, 4-5-6; then two pitches: 9-8, 2-3; and finally one from each hexachord: 7,1.

Ex. 7.12 *Île de feu* 2: Section 10 Row 7



This is similar to row 3 in that, although no methodical reading of the series is present, the effect created is once again that of a closing fan. The numbers in bold help highlight this: **1 6 12 8 11 5 2 7 3 4 10 9**.

Ex. 7.13 *Île de feu* 2: Section 10 Row 8



This begins with five notes (7 11 12 8 1) which is then transposed, but with a change on the last note (5 9 10 6 **2**) and ends 4 3. The reason for the change at the end of the second five-note set is that Messiaen cannot state E-flat (note 11) again.

Ex. 7.14 *Île de feu 2*: Section 10 Row 9



This row is characterised by perfect fourths and semitones and as such contains micro transpositions: 4-9 becomes 3-8; and 5-6-7 becomes 10-(12)-11 (inexact).

Ex. 7.15 *Île de feu 2*: Section 10 Row 10



This is virtually identical to row 1 except that the first note in row 1—A (note 5)—is moved to the end of row 12, which slightly spoils the permutation:

1	2	3	4	
12	11	10	9	
6	7	8	(5)	

7.2.4 Concluding Remarks on ‘Île de feu 1’ and ‘2’

In the above analysis of the opening and closing *études* that make up the *Quatre études de rythme* large portions of the music were not discussed. With respect to their sectional structure (which harks back to *Cantéyodjayâ* and earlier works), the juxtaposition of a fiery theme (which in itself is very much treated to ‘old’ Messiaenic compositional devices—chords of resonance, birdsong, the presence of augmented fourths, durations determined by prime numbers, to name but a few) with highly organised twelve-tone material (*Île de feu 2*) sees Messiaen performing a delicate balancing act between the old and the new. Although the interventions in *Île de feu 2* also employ fixed articulation and dynamics (in a move that mirrors the approach taken in *Mode de valeurs*), the level of innovation is perhaps not as sophisticated as might initially be suspected. The *Vif* section (page 6) of *Île de feu 2* best illustrates this. Messiaen’s interest in the technique surely lies in its ‘Charm of Impossibilities’ insofar as at some point in

the permutation process the original twelve-tone (or x-note) series returns. However, Messiaen's approach to automatism is to exhaust all the resources: a bit like what Boulez would do in *Structures Ia*. Rather than drawing on some of the resulting rows and doing something with them, which is what happens in traditional serialism, the apparent compulsion to state all the permutations in succession means that when the end is reached there is nowhere left to go. The result is circularity and sectional music. On initial inspection the short six-bar *Vif* passage seems isolated from what has gone before and from what follows. In Messiaen's defence, though, by arranging the order of the permutations to reserve the ascending chromatic row for the final permutation, a sense of expectation and of an impending climax is created. The climax does then follow: the combining of the final (main) interversions (9 and 10) with the main theme of the piece.

The 'palindromic toccata', which occupies a substantial part of *Île de feu* 2, also sees a fusing of the old with the new. The melodic 'jâtis' of the right hand are pitched against ten disparate twelve-tone rows in the left hand. As the analysis of this section showed, the rows are not related to one another but they do occasionally share similar fan-like shapes, and one of the rows is the interversion formula of Section 7 (*Vif*). The governance of prime numbers, coupled with points of symmetry, determines the overall duration/structure of this section. However, yet again, once the process has started there is an inevitability to the outcome. Because of the use of a point of symmetry to allow an immediate retrograde statement of a row, each resulting series of twenty-three pitches affects a form of circular closure. This is probably only noticeable from an analytical point of view because Messiaen is very careful to give prominence to the 'jâtis': they are marked *forte* while the accompanying twelve-tone material is marked *piano*. In addition, the fact that the two independent lines are written in close proximity and frequently cross over with respect to pitch also blurs the individual compositional processes. Therefore, as was the case with the interversions in the *Vif* section (page 6), Messiaen manages to create a convincing passage of music, which somehow seems to transcend the sum of its constituent parts. This would not be the last time that Messiaen would deploy such a substantial retrograde reading: in the first movement of the *Livre d'orgue* Messiaen creates, perhaps, his most austere and abstract piece of music to date.

Finally, it would seem reasonable to conclude that every time Messiaen employs intervension techniques in *Île de feu 2*, he is faced with the limited amount of material that they produce. These limitations, it could be argued, may provide some insight into Messiaen's working with permutations of 32-note/duration series in *Chronochromie* and other works, given that such a number can generate a greater wealth of material. The use of interventions and other approaches to twelve-tone writing will be seen again in the *Livre d'orgue*, and will be discussed in chapters 8 and 9.

7.3 *Neumes Rythmiques*

Neumes Rythmiques was composed in Tanglewood in 1949 and shares the sectional/collage structure of *Cantéyodjayâ* but not its *mode du durées, de hauteurs et d'intensités*. There are preoccupations with ideas from works in the early 1940s in the deployment of prime numbers, the symbolism of the number three, and chromatic durations, but each of these is approached in a fresh and innovative matter. One of the most striking features of the piece is not that it in anyway responds to serialism but that through its 'neumes' it continues the idea of fixed timbre seen throughout these studies. Paul Griffiths comments that this suggests a parallel with Cage—this has already been covered in detail in this thesis—but that it also looks forward to 'Stockhausen's conception in *Mantra* of dissonance and consonance as measures of frequency ratio with a central pitch'.³⁵ Griffiths bases this on the prevalence of the note E above middle C and undoubtedly on Messiaen's employment of his own 'chord of resonance' first encountered in the eighth bar of the first set of neumes. Ex. 7.16 is an extract from the opening set of neumes; it includes the first three neumes and the final chord of resonance.

³⁵ Griffiths, *Olivier Messiaen*, pp. 149–50.

Ex. 7.16 *Neumes rythmiques: Neumes*

The regular presence of ‘E’ is most striking, as is the dissonant quality of the harmonies and the angularity of the rhythms. For now, each bar represents a neume characterised in its own unique way. The first neume in the above example—the first neume of the piece—appears a total of eleven times (a prime number) throughout and is always marked with the same dynamics, accents and so on. Its pitch and register also remain unchanged. Griffiths identifies nineteen specific neumes ‘distinguished not only in terms of melodic contour like medieval neumes, but also in terms of rhythm, dynamics and harmonisation [...]’³⁶ He does not list these and his attempt to show how some of the neumes are slightly altered during the course of the piece is unsatisfactory.³⁷ For example, the last bar in Ex. 7.16 could be classified as two neumes because the first part of the bar appears on numerous occasions on its own, albeit it in different harmonic contexts (see, for example, its isolated appearance in the first bar of page 4³⁸ where it is harmonised by a B-flat F B-natural chord), and the resonant chord appears only one more time at the end of the last set of neumes. There are also connections between neumes. Peter Hill, for example, suggests that the turn which precedes the final bar of the first set of neumes (see the final neume in Ex. 7.16) gives rise to the ‘sweeping demisemiquavers’³⁹ that frame the fifth set of neumes; they are also present in the sixth and seventh sets. This neume is called

³⁶ Ibid., p. 149.

³⁷ Ibid., pp. 150–51.

³⁸ The page number refers to the number in the Durand Score: the first page of music is page 2.

³⁹ Hill, ‘Piano Music II’, *Messiaen Companion*, p. 315.

‘tristropa’ in Messiaen’s analysis.⁴⁰ The third neume in Ex. 7.16 has a strong connection with the last neume in the example. The melodic contour in the middle stave of bar 3 is A B B-flat E-natural: this is identical melodically to the start of the final neume quoted. This characteristic falling tritone will also play an important part in the third section of the piece, which will be discussed below. The last chord of neume 3 (bar 3 in Ex. 7.16) is pitch class set 6-Z43 [0, 1, 2, 5, 6, 8]; the final chord in the example—the chord of resonance—now has the E on the bottom and its pitch class set is 8-23 [0, 1, 2, 4, 5, 6, 8, 10], which is an expansion of chord 6-Z43.

Of all the pieces discussed thus far, Messiaen’s analysis of *Neumes rythmiques* in the *Traité* is the most comprehensive and successful.⁴¹ He begins with a brief discussion of *arsis* and *thesis* and notes that plainchant neumes are more melodic than rhythmic. Messiaen is keen to stress that by changing the plainchant neumes into rhythmic neumes the *arses* and *theses* are not destroyed.⁴² Messiaen diligently lists all the neumes by their Latin names; he also shows their melodic shapes, the corresponding composed rhythms and reiterates that ‘for each rhythmic neume I chose a fixed intensity which determines its expressive quality once and for all’.⁴³ Returning to Ex. 7.16, the neumes present are ‘podatus’, ‘clivis’, ‘scandicus’, and ‘pénultième et finale’ (this last one is not a plainchant neume).⁴⁴ Messiaen’s full description of the final neume is that the penultimate is coloured with inferior resonance and the final is coloured with superior resonance.⁴⁵

When the neumes return again on page 3 they begin with what is the most straightforward neume of the piece, reproduced in Ex. 7.17. With its straightforward rhythm and prominent tritone on top, this is one of the ‘most

⁴⁰ *Traité*, III, p. 149.

⁴¹ See Messiaen, *Traité*, III, pp. 147–64. Wai-Ling Cheong also discusses how Messiaen saw birdsong in the shape of many neumes. Her discussion provides a useful summary of Messiaen’s analysis of neumes and Greek rhythms in *Traité* V. See Wai-Ling Cheong, ‘Neumes and Greek Rhythms: The Breakthrough in Messiaen’s Birdsong’, *Acta Musicologica*, 80 (2008), 1–32 (see especially p. 7 ff.). Cheong’s article also reproduces appendices from *Traité* IV (neumes) and *Traité* I (Greek rhythms).

⁴² Messiaen, *Traité*, III, 147.

⁴³ ‘Pour chaque neume rythmique, j’ai choisi une intensité fixe, qui détermine une fois pour toutes sa valeur expressive.’ Messiaen, *Traité*, III, p. 147.

⁴⁴ Messiaen, *Traité*, III, p. 149.

⁴⁵ *Ibid.*, p. 156.

equally recognised neumes'.⁴⁶ From Ex. 7.16 it can be seen how 'bistropha' is derived from the middle voice of the third neume and the turn at the end of the first set of neumes. 'Bistropha' appears five times in this condition but towards the end of the piece (the last two bars of page 10 to the first bar of page 11) it appears inverted with different pitches (see the second line of Ex. 7.17).

Ex. 7.17 Falling Tritone Neume ('Bistropha') and Development

Un peu lent

mf (cuivré, glissé)

Un peu lent

Poco accel.

cresc.

glissé

Griffiths comments that 'it takes on the rising C sharp - D minor ninth of another neume, and with slightly increasing speed contracts this to D - D sharp followed by D sharp - C.'⁴⁷ The most likely source for this is the first neume on the last system of page 5 [see the first bar of Ex. 7.18]. Messiaen gives this neume the name 'porrectus'.

Ex. 7.18 'Porrectus'

ff

ff

glissé

⁴⁶ Griffiths, *Olivier Messiaen*, p. 151.

⁴⁷ Ibid.

This neume (characteristic of so many with its ametrical effect because of the added value), based on a prime number (seven) and reading as a non-retrogradable rhythm, appears in this form three times in the piece. However, this neume begins its existence in a contracted form in the previous line (the first bar of system 4, page 5): the first and third chords of Ex. 7.18 are now semiquavers and the middle chord is written as grace notes; it is a part of the neume Messiaen classifies as ‘climacus’. This contracted version appears six times in the piece, frequently in conjunction with other neumes, which helps generate a wealth of subtly developed material.

In the introduction to this section the significance of the number three was mentioned. There are three distinct sound blocks, of which the neume section discussed above is the second. The other two ideas in the piece are more organised in terms of mathematical formulae and follow logical patterns. The first idea (‘rythme en ligne triple’), which opens the piece, consists of a progressively augmenting theme in the lower register of the piano accompanied by dissonant ‘resonant’ chords in the treble. Ex. 7.19 shows this idea divided into four constituent parts that have been labelled A to D.⁴⁸

Ex. 7.19 *Neumes rythmiques*: ‘rythme en ligne triple’

⁴⁸ These are my divisions. Messiaen’s analysis of this recurring idea is rudimentary and goes little further than the comments present in the score.

Motif A drives the section: when it changes the other motifs adapt to suit it. Messiaen indicates the duration of each of the notes in semiquavers: the first is one semiquaver; the second, six; and the third, eleven. When it is repeated in bar 2 all the values have increased by one semiquaver. This motif uses the pitch class set 6-Z10 [0, 1, 3, 4, 5, 7].⁴⁹ Motif B is a quiet oscillating pair of dyads, which begins one semiquaver after the second note of idea A. In bar 2, motif B is preceded by an extra semiquaver rest to allow it to begin immediately after the second note of motif A. There are now six chords (an increase of one) to match the increased duration of the second chord of motif A. Motif C is a favourite of Messiaen's—a series of chords preceded by grace note chords—which remains unchanged in bar 2.⁵⁰ The final motif (D) is a repeated three-note chord. In the second bar this is played four times rather than three. There is a sense of *personnages rythmiques*⁵¹ here, since one part acts on another (motif A acts on motifs B and D) and one part remains the same (motif C). However, the technique is modified as the part acted on consists of two ideas that are subject to augmentation rather than diminution. The pitch class set of the final chord(s) is 3-3 [0, 1, 4], which is a subset of 6-Z10. The combined pitch class set for motifs B and D is 6-Z19 [0, 1, 3, 4, 7, 8]. The justification for combining these motifs is that they are inextricably linked to motif A, because their duration changes to match that of motif A. Pitch class sets 6-Z10 [0, 1, 3, 4, 5, 7] and 6-Z19 [0, 1, 3, 4, 7, 8] are regarded as maximally similar with respect to pitch class in Forte's classification but a stronger relationship does not exist because the interval vector of each—6-Z10 [333321] 6-Z19 [313431]—is neither identical nor totally different, so perhaps not too much significance should be attached to this analytical observation. However, amalgamating motifs A, B and D gives the pc set 9-3 [0, 1, 2, 3, 4, 5, 6, 8, 9] and this acts as a superset for the section. The chords that remain unchanged—motif C, ignoring the grace notes—have pc set 8-17 [0, 1, 3, 4, 5, 6, 8, 9], which is a subset of 9-3. Adding the grace notes to the

⁴⁹ Forte comments that Schoenberg particularly highlighted this pc set in his Op.23/4—*Five Piano Pieces*. Its interval vector is 333321, which Forte describes as *near equal distribution*. See Allen Forte, *The Structure of Atonal Music* (New Haven and London: Yale University Press, 1973), p. 18. It is worth stressing that Messiaen's use differs from Schoenberg's; Schoenberg states three major thirds in succession.

⁵⁰ These are reminiscent of Messiaen's resonant appoggiaturas and embellishments. See *Technique*, I, p.56.

⁵¹ Messiaen's formal explanation of this term is discussed in Section 8.2.

chords adds little since all twelve semitones are present. However, each pair of grace notes is identical in terms of pitch class (4-9 [0, 1, 6, 7]), which is also a subset of 9-3 under transposition. Only two pitch classes are absent from the grace notes (E-flat and A) and it will be noted that these make up an augmented fourth, which was prominent in the neumes section discussed earlier.

This complete theme/idea (two bars) occurs a total of four times taking the same approach of augmenting the durations of pitches and repeating certain chords as discussed above; motif C remains unchanged throughout. In the score Messiaen describes the process as ‘rythme en ligne triple: 1 à 5, 6 à 10, 11 à 15’; in other words the first note gradually increases in value from one to five semiquavers, the second from six to ten and the third from eleven to fifteen. At the start of statements two to four Messiaen repeats the final bar of the previous statement. Following the duration structure of motif A, the result is as follows:

1.	1	6	11
	2	7	12
2.	2	7	12
	3	8	13
3.	3	8	13
	4	9	14
4.	4	9	14
	5	10	15

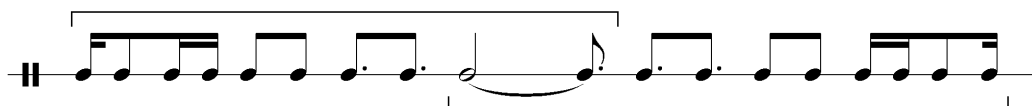
A discernible link exists with the neumes section in the use of fixed timbres, whereby the dynamics and attacks seen in Ex. 7.19 are maintained throughout all statements.

The final theme/idea that makes up the piece is a series of palindromic rhythms whose durations are determined by a series of prime numbers: 41, 43, 47 and 53. Two three-note semitone clusters—A B-flat B in the left hand and G G-sharp A in the right hand⁵²—are hammered out at the extreme registers of the piano to a rhythm that lasts for forty-one semiquavers (see Ex. 7.20).

⁵² This same lower cluster was used in *Île de feu I*.

Vif (nombre premier en rythme non rétrogradable)

Ex. 7.21 Non-retrogradable Rhythm (duration 41 semiquavers)⁵³



The same approach is taken in the other three occurrences of this idea; in other words, the clusters are hammered out to a non-retrogradable rhythm and

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are interspersed with the same two tritones (although the tritones become more plentiful in the subsequent statements). Messiaen also notes the presence of a Hindu rhythm ('dhenkî') in the final version.⁵⁴ A summary of the four occurrences of this idea reveals that the prevalence of prime numbers goes beyond the durational structure, with the minor exception of the third statement.

Fig. 7.6 Tabulation of Palindromic Rhythmic Clusters

	Duration in Semiquavers	Number of Clusters/Rhythmic Units
1	41	17
2	43	11
3	47	27 (not a prime number)
4	53	19 ⁵⁵

7.3.1 'Neume rythmiques': Concluding Comments

The three ideas discussed above are deployed to create a piece of music in fifteen sections. Labelling the ideas as A ('rythme en ligne triple'), B (neumes) and C (palindromic rhythmic clusters) as they first appear in the piece, gives the following structure: A B C B A B C B A B C B A B C. This shows that the 'neumes' idea (B) acts as a refrain that punctuates the two rhythmic ideas. The sectional structure of *Neumes rythmiques* is, like *Île de feu 1* and *2*, in stark contrast to the 'through-composed' *Mode de valeurs*. Given that *Neumes rythmiques* was composed in Tanglewood shortly after Messiaen left Darmstadt, it was effectively the first of the *Quatre études* to be composed (as mentioned in the previous chapter *Mode de valeurs* was not completed until December 1949). *Neumes rythmiques* was composed at the same time as *Cantéyodjayâ* and the two works are alike in their use of 'refrains'; but, *Neumes rythmiques* is a more cohesive piece and contains far fewer distinct sections. The piece looks back to harmonic and rhythmic ideas earlier in the 1940s but looks forward in its use of fixed timbres (after Messiaen had already sketched his plans for *Mode de valeurs*). In terms of the development of the three ideas, themes A and C are elongated rather than developed: their pitch content does not change at all; one

⁵⁴ Messiaen, *Traité*, III, p. 161.

⁵⁵ Messiaen also highlights the prevalence of prime numbers in the constituent parts of the final statement. See *Traité*, III, p. 162.

‘can almost hear Boulez’s criticism that Messiaen juxtaposes rather than composes. The neumes (B) section also involves substantial direct undeveloped repetitions: for example, the fourth neume (page 2, line 4, bar 2) is repeated three times in succession at the end of page 3; there is a slight change in that Messiaen adds an *accelerando* and *rallentando*. Whilst this might suggest a sense of stasis, the large number of neumes (and some development seen, for example, in ‘bistrophes’) and their extremely rich harmonic language makes them feel less repetitive than themes A and C.

In terms of the overall experience or aesthetics of the piece, it is unlikely that just juxtaposing and subtly developing around twenty neumes would be enough to sustain a piece. The idea of framing the neumes sections with rhythmic themes was, therefore, a good one but these themes are so radically different to the neumes that they feel as if they come from a different composition. Perhaps, by the end of the piece, they feel a little more integrated but this is simply because Messiaen repeats them (each rhythmic idea appears four times) and the listener becomes more familiar with them.

It is easy to see how *Mode de valeurs* was regarded as the most radical of the *Quatre études*. With the exception of the twelve-tone writing in *Île de feu 2*, the rest of the music that makes up the *Quatre études* is essentially a development of techniques Messiaen had already explored earlier in the 1940s. In many ways the next two works (both for organ), and in particular the *Livre d’orgue* (to be discussed in the next chapter), represent a greater break with Messiaen’s past. The reason that the *Livre d’orgue* would prove to be less influential than *Mode de valeurs* is that it was not heard or published until several years after its composition and by this time composers like Boulez and Stockhausen had already made their first attempts at total serialism.

CHAPTER EIGHT

Livre d'orgue: Pieces 1, 2, 5 and 6

8.1 Introduction

This collection of pieces sees Messiaen rekindle his interest in religious symbolism (and earlier preoccupations) but continuing in the new abstract style explored in the *Mode de valeurs* and *Île de feu* 2. The *Livre d'orgue* experiments further with irrational values, which were an important part of the *Messe de la Pentecôte* (1951). The first piece, 'Reprises par Interversion', sees the return of *deçî-tâlas* but now in a mathematically abstract deployment. The titles of the second and fifth movements, 'Pièce en Trio', have obvious associations with the Trinity and hark back to *Les Corps Glorieux* (1939), which in turn looks back to Bach and the Baroque Trio Sonata. The musical language, however, could not be more removed with much twelve-tone material and very complex rhythmic patterns. The virtuosic toccata that is the sixth piece ('Les Yeux dans les Roues') is also built on symbolism, conjuring up Ezekiel's vision of a wheel within a wheel, and contains a mixture of strict twelve-tone interversions and free twelve-tone writing. The third movement, 'Les Mains de l'Abîme', sees Messiaen depicting a quotation from scripture, which is evoked by the peaks and troughs of the Dauphiny mountains. The fourth movement, 'Chants d'Oiseaux', presages some of the larger birdsong works that were to follow, insofar as it attempts to recreate an actual scene Messiaen encountered. The final movement, 'Soixante-Quatre Durées', which takes the technique of permutation to new levels of complexity, sees Messiaen working with a duration series of one to sixty-four demisemiquavers in combination with traditional serial pitch material.

As already alluded to, in addition to the rhythmic complexities explored in these pieces, many of the movements consist of twelve-tone writing. Johnson, in summarising the work, comments that all but the fourth and last make use of twelve-tone series.¹ He also comments on connections between movements (which will be highlighted during the course of the analyses to follow), but it is perhaps only with the publication of Messiaen's *Traité de rythme* that the twelve-

¹ Johnson, *Messiaen*, p. 113.

tone writing in ‘Soixante-Quatre Durées’ (something which Johnson missed) would become apparent.

The pieces will not be discussed in the order of appearance/performance due to the inter-movement connections mentioned above, particularly with respect to twelve-tone writing. Therefore, before discussing the first ‘Pièce en Trio’ (piece 2), it is prudent to analyse ‘Les Yeux dans les Roues’, because both share the same twelve-tone series and they are easier to decipher/illustrate in ‘Les Yeux dans les Roues’. It also makes sense to discuss the two Trios together as they share many compositional traits. This chapter will focus on pieces 1, 2, 5 and 6 in the following order: (1) ‘Reprises par Interversion’, (6) ‘Les Yeux dans les Roues’, (2) ‘Pièce en Trio’ (I), and (5) ‘Pièce en Trio’ (II). Chapter 9 will examine the remaining pieces (3, 4 and 7) in that order: (3) ‘Les Mains de l’Abîme’, (4) ‘Chants d’Oiseaux’ and (7) ‘Soixante-Quatre Durées’.

Before looking at the music in detail, it is worth briefly recalling the events surrounding the work’s first performance in Paris in March 1955.² Messiaen was scheduled to give the premiere in his own church (La Trinité) as part of Boulez’s ‘Domaine Musical’ series. Many more people than expected turned up to hear the performance and, because the audience were using a side entrance rather than the church’s main door, there was a desperate crush which made it very difficult for Messiaen to get into the church.³

8.2 ‘Reprises par Interversion’

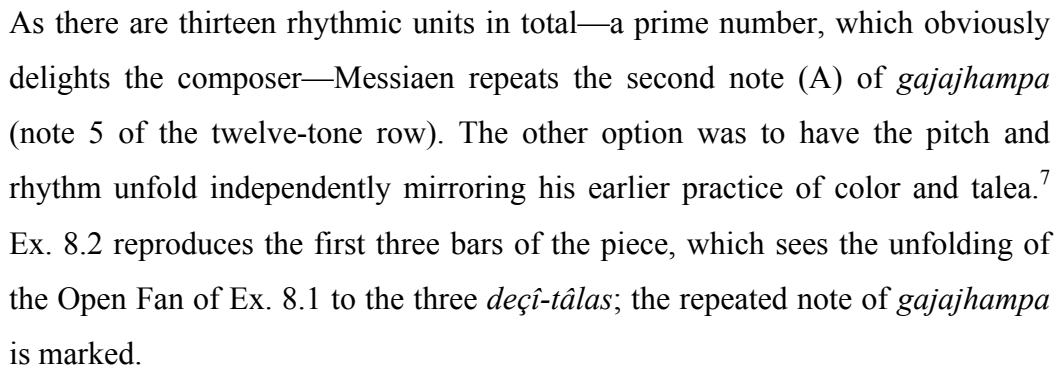
Messiaen discusses the first movement of the *Livre d’orgue* in some considerable detail in the third volume of his *Traité de rythme*.⁴ From an analytical point of view ‘Reprises par Interversion’ presents few problems as it does exactly what Messiaen describes at the start of the Durand score. A detailed analysis here is therefore superfluous but it is worth highlighting a few features. Of the three Hindu rhythms used—*pratâpaçekhara* (the force that emanates from the forehead, intellectual power), *gajajhampa* (the elephant’s jump) and *sârasa* (stork)⁵—only *pratâpaçekhara* begins in its original form and consists of

² Messiaen premiered the work in Stuttgart in 1953.

³ Hill and Simeone, *Messiaen* p. 202, citing Goléa, p. 208.

⁴ *Traité*, III, pp. 175–80.

⁵ ‘*Pratâpaçekhara*: la force qui émane du front, le pouvoir intellectuel; *Gajajhampa*: saut de l’éléphant, *Sârasa*: cigogne’, *Traité*, III, pp. 175–76.

Ex. 8.1 ‘Reprises par Intervernion’: Opening/Initial Row⁶

Modéré

R. 1. 2 3 4 5 6 7 8 9 10 11 12

gajajhampa Pos. 6

mf non legato

pratâpaçekhara

f

Pos. 5 5

G p

sârasa

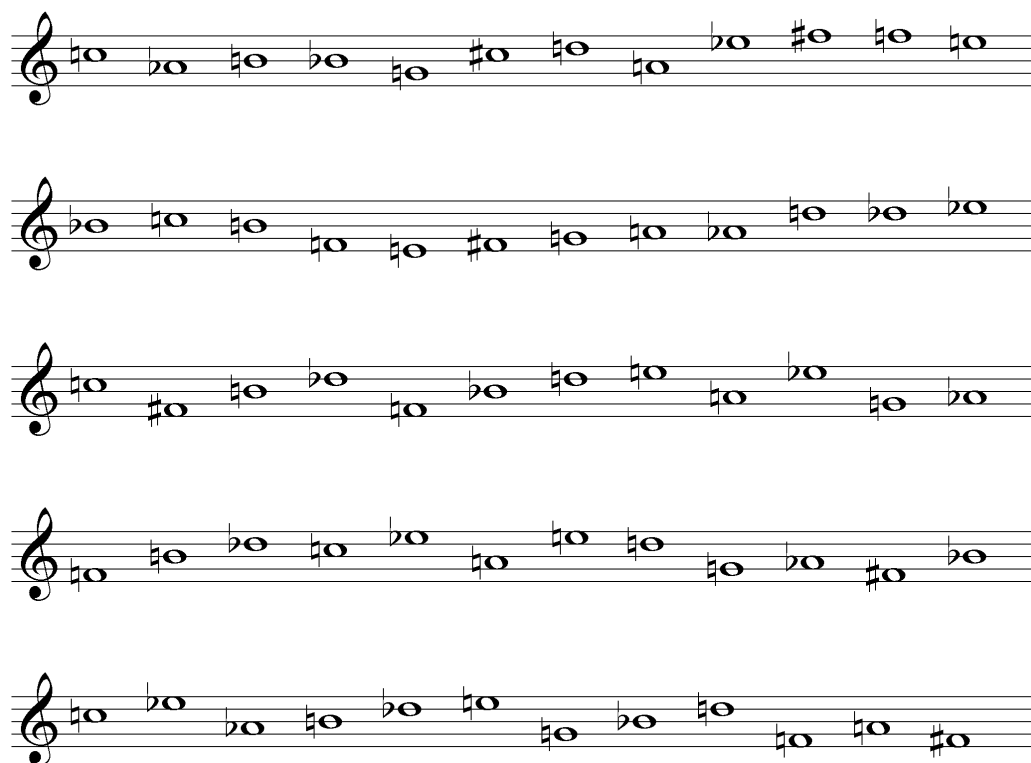
non legato

ff

⁷ *Traité*, III, pp. 177–78.

totally avoids any discussion of these rows in the *Traité*. The first section of the piece sees the monodic unfolding of the six rows, which Messiaen describes as a ‘single great voice embracing all the registers’.⁸

Ex. 8.3 ‘Reprises par Interversion’: Rows 2–6



To the average analyst there appears to be no relationship between the first and subsequent rows but Allen Forte has gone to considerable lengths to highlight similarities, differences, and connections in his discussion of trichordal and hexachordal parsing of the six rows.⁹ He concludes that rows 1, 3 and 5 and 6 are ‘interversionally symmetrical’, rows 4 and 5 are partially so, and row 2 is asymmetrical.¹⁰ Forte’s use of the verb ‘parse’ mirrors a phrase that Messiaen makes extensive use when discussing works in the *Traité*. The French word that Messiaen uses is ‘monnayage’. This is a difficult term to translate into English. The French verb, *monnayer*, means to parcel out, distribute, or even to divide a banknote into smaller dimensions. The word is probably best translated as ‘to describe the syntactic role of (a word) in a sentence or phrase; also, to resolve (a

⁸ ‘[...] une seule grande voix embrassant tous les registres [...], *Traité*, III, p. 177.

⁹ See Allen Forte, ‘Olivier Messiaen as Serialist’, *Music Analysis*, 21 no. 1 (2002), 3–34.

¹⁰ *Ibid.*, p. 20.

sentence, phrase, etc.) into component parts of speech and describe each part syntactically.¹¹

Before making some specific observations about the music, a brief summary of the piece's structure will be useful. Each of the six twelve-tone rows is made up of one statement of each Hindu rhythm. These rhythms are treated as *personnages rythmiques*, a phrase Messiaen explains by using a theatrical analogy:

Like a theatre scene: one of the actors leads the scene and moves another – a second actor is 'acted upon' and moved by the first – and a third actor, stationary, watches the conflict without intervening. Similarly, there are 3 *personnages rythmiques* here: one increases (that which is acting), the other decreases (that which is moved), and the third does not change (that which is watching).¹²

In practical terms, therefore, each rhythmic unit of *pratâpaçekhara* augments by a demisemiquaver on each repetition, each unit of *gajajhampa* diminishes by a demisemiquaver on each repetition, and *sârâsa* remains unchanged. The rhythms unfold throughout the rows in an order determined by interversions. As there are 3 rhythms, there are a possible 6 (3! - 3 factorial) arrangements—hence the six twelve-tone rows. Labelling the rhythms with their first letters reveals the six possible permutations and their order in the piece:

(1) P G S (2) P S G (3) G S P (4) G P S (5) S G P (6) S P G

Three crotchet rests signal the end of the rhythmic and pitch unfolding. The second section uses a straightforward Closed Fan (normal) interversion ('en éventail fermé, des extrêmes au centre') on the entire pitch content (notes 1 to 72, and by implication each note's respective duration) of the first section.¹³ This takes the form of reading alternating numbers from the beginning and the end and starts as follows: 1 72 2 71 and so on. A further three crotchet rests signal the end of this section before another interversion of the opening material begins—an Open Fan (retrograde) ('en éventail ouvert, du centre aux extrêmes').

¹¹ "parse, v.". OED Online. September 2013. <<http://0-www.oed.com.ditlib.dit.ie/view/Entry/138159?rskey=3Dw3ef&result=2&isAdvanced=false>> [accessed 8 December 2013]

¹² 'Comme sur une scène de théâtre: un des acteurs agissant mène la scène et en meut un autre – un 2^e acteur est « agi », est mû par le premier – un 3^e acteur, immobile, regarde le conflit sans intervenir. De même, nous avons ici 3 personnages rythmiques : l'on croît (c'est celui qui agit), l'autre décroît (c'est celui qui est mû), le 3^e ne change pas (c'est celui qui regarde).' *Traité*, III, p. 175.

¹³ The repeated note in *gajajhampa* is treated as a single entity.

This takes the form of reading the numbers in retrograde (right to left) motion starting as follows: 37 36 38 35 etc. The final section, which once again begins after three crotchet rests, is simply the retrograde of the opening section.

Despite the apparent freedom of the first section with respect to pitch (by which I mean the twelve-tone rotes not being created through interversions, reminiscent of the ‘palindromic toccata’ in *Île de feu* 2),¹⁴ subsequent sections are highly organised according to strict interversions, but with one or two minor alterations.¹⁵ As the remainder of the piece unfolds, the duration, register and timbre of a particular note from the first section are now fixed for the remainder of the piece. Messiaen bends the rules slightly while rearranging the pitch material: he explains that he never separates the repeated notes in *gajajhampa* and maintains the groups of semiquavers and demisemiquavers in *sârasa* because ‘they have the same duration and the same timbre’.¹⁶ The overall effect of the interversion, of course, destroys or obliterates the *personnages rythmiques* so diligently created in Section I. Messiaen uses the words ‘dismantled’ and ‘dismembered’ in his discussion.¹⁷ Therefore, the Closed Fan of Section II reads as follows (with the repeated notes of *gajajhampa* underlined (but not repeated in the analysis) and the maintaining of the groups of *sârasa* marked in bold and linked by a dash):¹⁸

Fig. 8.1 ‘Reprises par Intervernion’: Section II Analysis

Rows 1 and 6:

1 72 2 71 3 70 4 69 5 68 6 67 7 **66-65 8-9-10 64-63-62 11-12** 61

¹⁴ See Forte, ‘Messiaen as Serialist’, p. 19, for an examination of the total pitch content and how it pivots around the last note of row 3 (E-flat), which is also the symmetrical centre of the ‘collective pitch array’.

¹⁵ Forte comments that Messiaen does not ‘completely observe the strict transformation [...] described in the *Traité*’ and goes on to show how the music, perhaps, should be written if one or two of the minor alterations were corrected (p. 26). The alterations can be clearly seen in the numerical unfolding produced in Fig. 8.1 above.

¹⁶ ‘elles sont de même durée et de même timbre’, *Traité*, III, pp. 178–79. In reading Messiaen’s analysis of Section II it is interesting to note that the repeated note of *gajajhampa* is given a distinct number. He reads the first note of Section I, then the first note at the end; then the second note at the start and the second and third notes from the end, which is the repeated note.

¹⁷ ‘démantelés et démembrés’, *Traité*, III, p. 179. Messiaen uses very colourful imagery to describe the music that is created by the interversions.

¹⁸ The effect of the interversion permutes rows 1 and 6, then 2 and 5, and finally rows 3 and 4. In the *Traité* Messiaen illustrates the permutation process in great detail: see III, pp. 178–79.

Rows 2 and 5:

13 60 14 59 15 58 16 57 **17-18-19** 56 **20-21** 55 22 **54-53** 23 **52 51 50** 24 49

Rows 3 and 4:

25 **48-47** 26 **46-45-44** 27 43 28 42 **29-30-31** 41 **32-33** 40 34 39 35 38 36 37

The above schematic shows how the interversion is inexact to allow for the grouping of certain notes, as per Messiaen's comments quoted above. Because of the displacement of the rhythms (and, by default, pitch), more abrupt contrasts of timbre arise. This creates an extremely bleak and austere sound-world. Despite this, though, by maintaining certain groups of pitches, such as those highlighted above, a small element of motivicism is preserved.

Section III takes as its basis the opening material and subjects it to an Open Fan arrangement. Messiaen starts to explain the process in the *Traité* but quickly cuts it short, commenting that the resulting interversion is 'exactly the reverse of the previous interversion'.¹⁹ It is, therefore, superfluous to produce another numerical schematic here.²⁰ That said, it is worth stressing that for the Open Fan operation to duplicate the retrograde of Section II, Messiaen must take the same approach of maintaining the various pitch groupings already mentioned. Since the final Section (IV) is a straightforward retrograde of Section I, this entire monodic piece reads the same forwards as in retrograde. The presence of three crotchet rests between each section—itsself a prime number and therefore symmetrical—means that the point of symmetry for the entire piece occurs after Section II in the last bar, second crotchet rest, on page 2.²¹ In comparison to the palindromic section of *Île de feu 2* (discussed in the previous chapter), 'Reprises par Interversion' is obviously a more intricately pre-composed work. From the listener's perspective, this is not easy music; indeed some may question whether it is more technique (based on mathematical abstractions) than music.

Messiaen's interest in retrograde motion affords him an opportunity to (briefly) censure René Leibowitz in the *Traité*; according to Messiaen, Leibowitz described Schoenberg's deployment of retrograde motion as a 'miracle' and that

¹⁹ ' [...] est exactement l'inverse de l'interversion précédente', *Traité*, III, p. 180.

²⁰ This method of permutation has been discussed in detail in Chapter 7.

²¹ Page numbers refer to the page number printed in the score.

it was something ‘modern’.²² The tone here is unusually sarcastic for Messiaen. Could he at long last be responding to the highly sarcastic and personal attack that Leibowitz launched on Messiaen in the mid-1940s?²³ Messiaen goes on to quote an interesting passage from Jean Thibaud’s *Vie et Transmutations des Atomes*: he notes that Bach had already used retrograde canon in his *Musical Offering*, and that Machaut wrote a rondo based on retrograde movement. Messiaen believes that such procedures should not be limited to simple retrograde motion and reiterates that the number of possible permutations—note he doesn’t use the word ‘interversions’—of twelve items is over 479 million. At this point Messiaen’s terminology becomes a little muddled because he uses the term ‘intervention’ when talking about the six rows in ‘Reprises par Intervention’,²⁴ whereas in effect the six rows are merely unrelated permutations—save for the rather obscure parsings highlighted by Forte. The interventions are, in effect, sections II, III and IV, which Messiaen highlights at the end of this analysis.

8.2.1 *Timbre*

Regardless of how the interventions in sections II to IV affect the structure of the music, the fact that the music is written for organ—and with very specific registration requirements—means that a visual interpretation/inspection of the score only tells part of the story. The converse is also true: namely, it is only through a thorough inspection of the score that the processes at work reveal themselves. It would take an extraordinary ear to hear the structure and the complex permutations at work. Returning to timbre, the written notes only reveal a tiny portion of what is going to be experienced when the piece is heard. This approach to writing for the organ—whereby composers give detailed registration specifications—is typically French, and Messiaen (even in his earliest organ piece, *Le banquet céleste*) frequently experimented with unusual timbral combinations.²⁵ On an organ with over a hundred stops, the number of unique

²² ‘René Leibowitz a crié au miracle! Il semblait que la réversibilité rétrograde fut une conception moderne.’ *Traité*, III, p. 180.

²³ See Chapter 3 for a detailed discussion of Leibowitz’s critique.

²⁴ *Traité*, III, p. 180.

²⁵ One of the most innovative qualities of *Le banquet céleste* is that the choice of registration can give rise to different ways of interpreting or understanding the music as the piece unfolds. The opening slow, rich and string-like ‘theme’ permeates the whole piece but when the pedal enters

timbres that can be created is in the billions. Such timbres will be more distinct than those attempted in *Mode de valeurs* and it may that Messiaen saw in the organ a more dramatic way to build on Cage's prepared piano. Unlike in *Mode de valeurs* and the main interversions in *Île de feu 2* where each pitch has a unique timbre (determined by register, dynamics and articulation) for the duration of the piece, in 'Reprises par Intersion' each rhythm has a fixed timbre irrespective of what notes are being played: *sârasa* is always played on the *Grande Orgue* (Great) which is registered for two bourdons (16' and 8') and a 4' flute; *gajajhampa* always includes a single note on the *Pedal* (a powerful 16' bombarde) and two notes on the *Positif* (Choir) (4', 1' and two mutation stops—a nazard and tierce); and *pratâpaçekhara* is confined to the *Récit* (Swell) employing a 16' bourdon, an hautbois (oboe) and a cymbale (a mutation stop with several high pitches).²⁶

Messiaen says that he is not evoking religious or literary symbolism but that the timbre chosen for *gajajhampa* 'is of an elephantsque heaviness'.²⁷ Because no 8' stops are drawn for *gajajhampa*, 'the written note does not exist/sound'.²⁸ the pedal notes sound an octave lower than written and the notes on the *Positif* sound one octave, three octaves, a twelfth and a seventeenth higher than written. The link with *Mode de valeurs* is obvious: a note's register and timbre remains fixed throughout the piece, but there is some development here with respect to duration because of the deployment of augmentation and diminution (the *personnages rythmiques*). Once again Messiaen is mixing the old with the new. However, from an aural perspective, 'Reprises par Intersion' sounds much more radical than *Mode de valeurs*. The starkness of the monodic unfolding, coupled with strongly opposing timbres (all of which become even more austere in sections II and III when the interversions are applied) presents many challenges for the listener (and the performer). Gillian

with its *staccato à la goutte d'eau* the ear perceives this as the main theme because it pierces the texture with its use of mutation and octave stops. The opening material now sounds more like an accompaniment to the pedal line, rather than as a theme in its own right.

²⁶ For convenience the organ manuals will be labelled as *Great*, *Swell* and *Positif* throughout.

Gillian Weir's contribution to *The Messiaen Companion* has an interesting section on registration, with specific reference to Messiaen's organ at La Trinité. She makes the important point that performers of Messiaen's music should be aware of the qualities of the stops on his organ when registering on other instruments. See 'Organ Music II', in *The Messiaen Companion*, pp. 354–91 (pp. 372–73).

²⁷ 'est d'une lourdeur toute éléphanesque', *Traité*, III, p. 177.

²⁸ 'le son écrit n'existe pas', *Traité*, III, p. 177.

Weir, in discussing this piece, comments that ‘Monody is not necessarily melody’.²⁹ Repetition and continuity gradually give way to seemingly random sound complexes, which exist for the ‘moment’ rather than being part of a logical syntactical argument/continuum. One of the few things the listener could latch on to is the grouping of notes in *sârasa* but even these assume the role of a sound complex, insofar as the material that precedes and follows it is totally unconnected in a conventional musical sense. Griffiths suggests that one of things Messiaen took from Webern’s compositions was this ‘cherishing of each note as a separate event’ and, despite the fact that the rhythms presented in Section I are destroyed in the subsequent sections, the listener will still recognise parts of them because of Messiaen’s assignation of a range of distinctive timbres.³⁰

In conclusion, it is very difficult to assess this piece’s compositional merit. It could be argued that once Messiaen prepares the canvas, as it were (replete with the twelve-tone pitch material, the assignation of timbre and register, the manipulation of the *deçî-tâlas* and the permutation processes), the piece inexorably works itself out in what is yet another example of automatism. This point is succinctly summarised by Weir when she says, that anyone could compose the rest of the piece.³¹ It is interesting to look at how the work was perceived shortly after its composition. David Drew, writing in 1955, says that the *Livre d’orgue* ‘promises well for the future’ but its first movement ‘Reprises par Interversion’ ‘reproduces precisely the inanity of *L’Echange*’.³² It is not for this thesis to determine whether that makes for good or bad music, but rather to flag the aesthetic issues raised. It is worth noting that the individual processes at work in this piece, be that the use of permutations, *personnages rythmiques* and so on, are not new in themselves, but the final product seems worlds apart even

²⁹ Weir, ‘Organ Music II’, in *The Messiaen Companion*, p. 366.

³⁰ Griffiths, *Olivier Messiaen*, pp. 159–60.

³¹ Weir, p. 366.

³² Drew, ‘Messiaen (III)’, p. 50. As mentioned in Chapter 3, Drew does not shy away from criticism, but he also acknowledges what he considers to be ‘good’ in Messiaen. The final article of his trilogy on Messiaen concludes with a study of *Turangalila*, which is probably one of the earliest detailed accounts of the work. Drew describes how, on first hearing, he found some parts of the work to be clear but others a ‘meaninglessly jumble.’ ‘Now, after repeated hearings and close analysis, I find that an extreme clarity—of orchestral texture and of formal procedure at *all* levels—is one of the most remarkable features [...]’ (p. 50) This is high praise indeed from Drew. The true hallmark of good music is that it reveals more of itself over the course of several encounters: all is not revealed or known after just one performance.

from the so-called revolutionary *Quatre études*. Another interesting exercise, given that both pieces are monodic, would be to compare ‘Reprises par Interversion’ with ‘Subtilité des Corps Glorieux’ written some twelve years earlier (but due to time constraints, this is not possible here).

8.3 ‘Les Yeux dans les Roues’

Written in Paris in 1951, according to the score, this piece has a quotation from the Book of Ezekiel, Chapter 1 vv. 18 and 20: ‘and their rings were full of eyes round about them four [...] for the spirit of the living creature was in the wheels.’³³ The score indicates that the piece is for Pentecost Sunday. Messiaen evokes Ezekiel’s vision superbly in an incredibly fast and virtuosic toccata made up entirely of twelve-tone rows. Messiaen employs two methods of creating the twelve-tone rows: one for the pedals and one for the manuals.

8.3.1 Pedals’ Material

Messiaen specifies fixed durations for each of the twelve notes, as he had done in *Île de feu 2* and *Mode de valeurs*. Ex. 8.4 shows that the durations range from one to twelve semiquavers—still Messiaen’s favourite approach—but, unlike in *Île de feu 2*, the registers are not fixed and Messiaen does not take the duration series (i.e. the chromatic row) as the basis of his pitch material.

Ex. 8.4 ‘Les Yeux dans les Roues’: Pedal Duration Series




For the first time in his use of interversions Messiaen creates an independent pitch row (Ex. 8.5).³⁴

³³ King James Translation. ‘Et les jantes des quatre roues étaient remplies d’yeux tout autour. Car l’Esprit de l’être vivant était dans les roues’.

³⁴ The notes are written as semibreves for convenience. The bracketed numbers refer to durations in semiquavers.

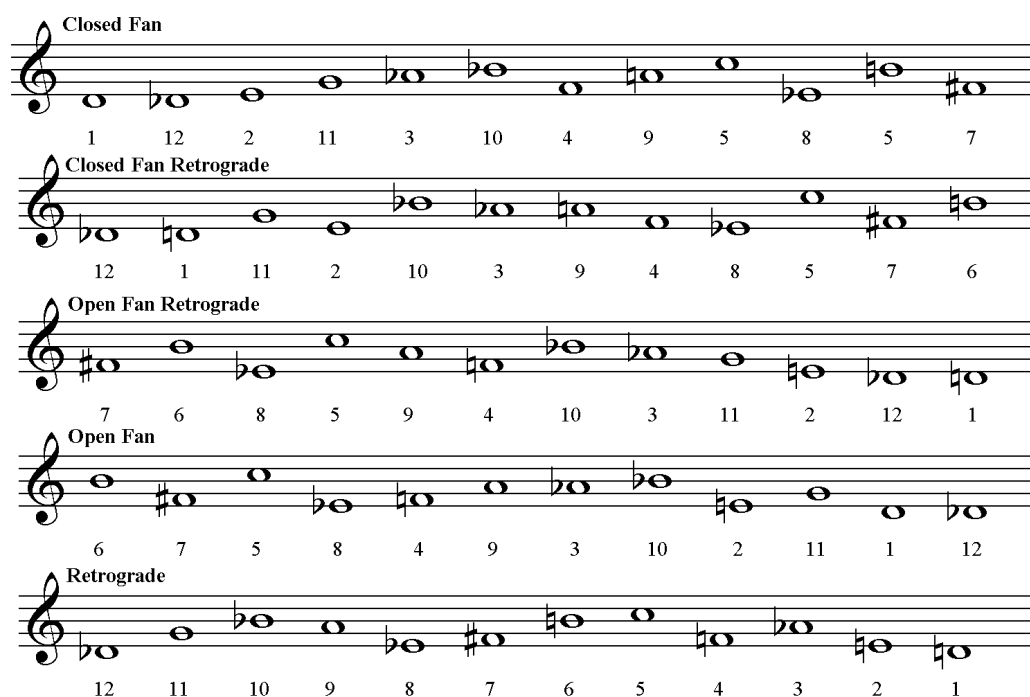
Ex. 8.5 'Les Yeux dans les Roues': Pedal Row



Position	1	2	3	4	5	6	7	8	9	10	11	12
Duration	(11)	(9)	(5)	(8)	(1)	(2)	(7)	(10)	(4)	(3)	(6)	(12)

Unlike in *Île de feu 2*, where each inversion is derived from the previous one, each inversion in the pedals of 'Les Yeux dans les Roues' is derived from the original row using a different permutational operation: Closed Fan and Open Fan, their retrogrades, and the retrograde of the original row. The resultant rows in Ex. 8.6 are all derived from the row in Ex. 8.5:

Ex. 8.6 'Les Yeux dans les Roues': Permutations of the Pedal Row³⁵



Closed Fan
1 12 2 11 3 10 4 9 5 8 5 7

Closed Fan Retrograde
12 1 11 2 10 3 9 4 8 5 7 6

Open Fan Retrograde
7 6 8 5 9 4 10 3 11 2 12 1

Open Fan
6 7 5 8 4 9 3 10 2 11 1 12

Retrograde
12 11 10 9 8 7 6 5 4 3 2 1

Each pedal statement is preceded by seven semiquaver rests (a prime number), which means that the pedal part begins in bar 2. The order of the entries is as in Exx. 8.5 and 8.6: Original, Closed Fan, Closed Fan Retrograde, Open Fan Retrograde, Open Fan, and Retrograde. Eleanor Trawick correctly observes that

³⁵ Durations are omitted; numbers refer to note position.

this is nearly a palindrome:³⁶ a glance at the above rows reveals that had Messiaen swapped the Open Fan and Open Fan Retrograde, the entire pitch series would read the same forwards and backwards. This might have been expected given Messiaen's interest in all things non-retrogradable and the 'charm of impossibilities', but this serves to illustrate that, despite extensive pre-composition, Messiaen remains master of his material and not enslaved by it. He may also have wanted to avoid replicating the retrograde structure of 'Reprises par Intersion'. To a certain extent the pedals' material determines the length of the piece. In total there are six twelve-tone statements, each preceded by seven semiquaver rests. The entire duration should technically be—(7 (semiquaver rests) + 78 (duration of each row in semiquavers) x 6 (number of statements))—510 semiquavers, but at the end of the final row (Retrograde) Messiaen holds the last note for four times its value. A possible explanation for this will be given later. Given that the duration of *Mode de valeurs* was significant (457 quavers, a prime number) and that this number was prominent in the analysis of the 'Palindromic Toccata' of *Île de feu 2*, it is worth checking/calculating the duration of 'Les Yeux dans les Roues'. The result of this is 543 semiquavers (510 + 33 (3 x 11—duration of last note)).³⁷ This is not a prime number, which means there is no subliminal connection between 'Les Yeux' and the other two pieces.

8.3.2 *Manuals' Material*

Messiaen creates twelve twelve-tone rows (six for each hand), but the approach is not analogous to that seen in the *Vif* section of *Île de feu 2*. The rows are not related to each other by intersion or any traditional serial transformations and the ethos of the material is more akin to the rapid palindromic toccata (Section 10) of *Île de feu 2* discussed in the previous chapter. At this stage, it should be noted that the manuals' rows in 'Les Yeux dans les Roues' were first used in the first 'Pièce en Trio',³⁸ yet to be discussed; one of the reasons for analysing 'Les Yeux dans les Roues' first is that the rows are slightly (but not much) more

³⁶ Trawick, p. 25.

³⁷ As mentioned earlier, the final note is held for four times its normal value. The duration of 510 semiquavers includes the first 'quarter' of this. The note is eleven semiquavers long, which means that the piece lasts an additional thirty-three semiquavers.

³⁸ Johnson, p. 114.

decipherable in this piece. Ex. 8.7 shows the twelve rows, presented as they theoretically appear in the piece: that is, RH1 sounding with LH1 etc.³⁹ By reading the first notes of each row in the following order RH1, RH2, LH1, LH2 and so on it can be seen that each row begins a semitone higher. However, it is not the case that for a particular note position 'x' all twelve semitones are presented over the course of the twelve rows. This is a strong indicator that the rows are independent of one another: in other words, no note-mapping is present.⁴⁰ In addition, the rows are not related through traditional serial operations.

Ex. 8.7 'Les Yeux dans les Roues': Manuals' Rows

The image displays musical notation for twelve rows of music, organized into six systems. Each system contains a right-hand (RH) and left-hand (LH) staff. The rows are labeled RH1, LH1, RH2, LH2, RH3, LH3, RH4, LH4, RH5, LH5, RH6, and LH6. The notation shows a sequence of notes across these rows, with some notes repeated or omitted, illustrating the independence of the rows.

Trawick observes that the cycle of pitches in the right hand is seventy-one notes long (not seventy-two), because the final note (A-flat) of RH4 is also the first note of RH5. Messiaen chooses not to repeat the A-flat at the beginning of RH5, which means that the note doubles as the end of one row and the start of

³⁹ RH1 is an abbreviation of Right Hand Row 1; LH1 is an abbreviation of Left Hand Row 1 and so on.

⁴⁰ See Chapter 7 for a discussion of this term.

another.⁴¹ This same avoidance of pitch class repetition was seen in the palindromic toccata of *Île de feu* 2. Trawick reproduces the twelve manual rows and six pedal rows on page 26 of her article but unfortunately there are five errors in the manual rows.⁴² The next section will explain how I determined the manuals' rows.

8.3.3 Analysis

Trawick's errors probably arose because some of the manual rows are quite difficult to decipher; that said, they are still easier to uncover than those of the 'Pièce en Trio' (I). With six rows assigned to each hand, in theory RH1 will be accompanied by LH1 and so on. An examination of each pair of rows shows only one pitch duplication (the A-flats at the end of RH4 and LH4) but Messiaen still omits notes from time to time (in part to avoid duplicating a note already sounding in the pedals): it is this that makes determining the rows so difficult.⁴³ Ex. 8.8 reproduces the opening of the piece.

RH1 and LH1 are stated in their entirety. If the unfolding of RH2 is examined in detail, with no knowledge at this stage that notes might be missing, by the time the A-flat in the middle of bar 3 is reached only ten unique pitches have been stated. But, because A-flat appears earlier in the row, and Messiaen adheres to the serial convention of avoiding pitch class repetition before a row is completed, this second A-flat must belong to the next row. Therefore, it can be concluded that some notes are missing from RH2. It is only by examining a large section of the piece (for example looking at all occurrences of RH2) that the rows can be deciphered.

⁴¹ Trawick, p. 25.

⁴² (i) RH2: note 4 should read 'G' not 'F'; (ii) RH5: note 1 should read 'A-flat' not 'A', and (iii) note 4 should read 'D-flat' not 'B-flat'; (iv) LH1: note 2 should read 'A-flat' not 'D-flat'; (v) LH2: note 1 should read 'E-flat' not 'D-flat'. These may be typographical errors but should have been spotted since there is obvious pitch duplication in the four rows cited.

⁴³ Notes are occasionally duplicated from time to time with respect to note position in non-paired rows. For example, note 2 of RH1 is E-flat; E-flat is also the second note of LH3. This, once again, shows that the rows are not related by interverson techniques.

Ex. 8.8 'Les Yeux dans les Roues': Opening⁴⁴

The musical score is written for piano and features a complex rhythmic pattern of semiquavers. It is divided into two systems. The first system includes RH1 (Right Hand 1), LH1 (Left Hand 1), RH2 (Right Hand 2), LH2 (Left Hand 2), and a pedal line. The second system includes RH3 (Right Hand 3), LH3 (Left Hand 3), and a pedal line. Fingerings are indicated by numbers 1-5 for the right hand and 1-7 for the left hand. Pedal points are marked with 'D Ped (3)', 'E Ped (10)', 'E Ped (1)', and 'Ab Ped (7)'. A specific annotation 'Bb RH (6)' is present in the first system. The score shows how the pedal line interacts with the hand parts, causing some notes to be omitted or shifted.

As mentioned earlier, this fast and relentless semiquaver material is reminiscent of the *Vif* section of *Île de feu* 2. Between any pairs of rows (for example, RH2 and LH2), there is no duplication of pitch if both start together on note 1 and progress unhindered to note 12, but there is an additional line at work here (the pedals), which makes the situation more complex than that seen in the earlier *étude*. The third note of RH2 is D but, because this note is sounding in the pedal line, Messiaen has to omit it; this is clearly marked in Ex. 8.8. When this happens it causes RH2 to move forward one note in its cycle, which means it is now one note ahead of its counterpart, LH2. There is now the possibility of note duplication between pairs of rows: B-flat is the seventh note of RH2 and the sixth note of LH2. These will sound simultaneously unless evasive measures are taken; Messiaen has to omit one of these notes: on this occasion he chooses to

⁴⁴ Again, the numbers refer to note positions within the row. A missing or omitted note is underlined and the position it should have occupied is indicated by an arrow. In addition, the reason for a note's omission is given; for example, in RH2, D Ped (3) indicates that the third note, D, is missing because it is sounding in the pedal.

omit the sixth note of LH2. This results in the rows coinciding again for their seventh notes [see Ex. 8.8]. Continuing this approach, the tenth note of RH2 is E and because this is sounding in the pedal Messiaen has to omit it. Therefore RH2 and LH2 end one note out of phase: in other words RH2 is one semiquaver ahead of LH2. This omission of notes creates a phasing effect so that, theoretically, RH3 should start one semiquaver ahead of LH3, because RH2 had only ten notes compared to eleven in LH2. But a careful examination of Ex. 8.8 illustrates that this assertion of a phasing of one semiquaver is not entirely correct. The reason for this is that the first note of RH3 (E) has to be omitted because an E is still sounding in the pedal: therefore, the rows are actually out of phase by two semiquavers. Looking then at the deployment of rows RH3 and LH3, Messiaen omits note 7 (A-flat) of LH3 as it is sounding in the pedal, and this returns the level of phasing to one semiquaver. These illustrations highlight the difficulty in discussing the exact amount of phasing between two rows; for the purpose of analysis, therefore, the most convenient compromise is to define the level of phasing based on where pairs of rows start in relation to one another. Messiaen has a free choice of what note to remove from where, but he restricts this to the manual rows: the pedal line reigns supreme, with no note ever being omitted. In the case of the B-flat omission discussed above (LH2), Messiaen could just as easily have kept the B-flat in the left hand and omitted it from the right.

The seven semiquaver silence in the pedal part at the start of the piece can possibly be accounted for now. By adhering to the traditional serial rule of avoiding pitch class duplication, Messiaen is able to generate a piece of music where the twelve-tone material continually shifts in and out of phase. The pedal's silence at the start allows the first two rows (RH1 and LH1) to be stated in their entirety because both rows have played 'D' (the first note of the pedal), before the pedal enters. The desire to state both opening rows in their entirety seems logical: for the phasing to work, there has to be something from which to move away, that is, rows coinciding with each other on a one-to-one or note-to-note basis. This gives the piece its point of departure. Indeed rows that coincide exactly with each other are in an extreme minority; there are in fact only seven occasions when note 1 of a right hand row coincides with note 1 of a left hand

row (see the shaded sections in Fig. 8.2): **1**: RH1/LH1, RH2/LH2; **3**: RH3/RH3, RH4/LH4; **5**: RH5/LH5; **6**: RH3/LH3; **8**: RH5/LH6.

Fig. 8.2, below, provides a rudimentary summary of which notes are omitted from the various rows in the piece; what the table cannot show are the minute shifts in phasing that occur throughout (see the notes below the table for an explanation of how to read the contents).

Fig. 8.2 ‘Les Yeux dans les Roues’: Note omission

	1	2	3	4	5	6	7	8	9
RH1	Full	Full	Bb	D G	E	E D	E G	Eb F#	D
LH1	Full	A	Ab A F	D G	F#	Db	Db E	Db	D C
RH2	D E	Db F#	A C	E	Eb	D	D	F#	D 11 ///
LH2	Bb	Full	F	E	Full	Full	D	Eb F#	D
RH3	E	D	Eb	Full	F	F#	Db	Full	
LH3	Ab	F D	Eb	Ab A	F	Full	Db	F# F	G (D)
RH4	F	D	F#	F	Full	Eb Bb	Full	E	
LH4	Bb	Bb	E F#	D (F)	Full	F	Db D	A D F	1 ///
RH5	Full	Db E	Full	Eb	E *	Full	Db	D **	
LH5	Eb	Db	Full	Bb (Eb)	E F#	A Ab	Bb Db A Eb	D E B	
RH6	Eb Bb	G	Full	Full	Db	E	Full	D	
LH6	Eb G	B Ab G	Db	Full	Eb Db	Ab D Bb	G	D F **	

Notes:

The shaded sections indicate pairs of rows that start together on note 1.

For the purpose of analysis and for discussing the level of phasing, I have divided the piece into theoretical sections (numbered 1 to 9); a section is one complete statement of all twelve rows.

* With **5**:RH4/LH4 out of phase (by one semiquaver) and both rows being complete, it would not seem possible for RH5/LH5 to begin in phase. However, because the last note of RH4 (A-flat) doubles as the first of RH5, the left hand's one semiquaver advantage is cancelled.

** In the eighth statement the left hand is one full row ahead of the right hand: in other words **8**:LH6 coincides exactly with **8**:RH5. These are shaded in grey.

The notes in brackets, bold and italics are occasions when duplication of pitches takes place. These are presumably ‘errors’ on Messiaen’s part.

The numbers in section 9 indicate what point has been reached in each row: **9**:RH2 **11** /// signifies that the row ends on the eleventh note; **9**:LH4 **1** /// signifies that the row ends on the first note.

Trawick notes that it is very difficult to illustrate this phasing and settles instead for an overview of how the manuals, with their phasing, interact with the

pedals.⁴⁵ In addition, she attempts to illustrate the missing notes from each row in a table⁴⁶ but this is both very difficult to read and contains several errors: Trawick counts forty notes missing from the RH rows and seventy-two from the LH rows; this should read forty-seven and seventy respectively.

A detailed analysis of the pitch content is not necessary but a few observations and conclusions are worth making. If the ultimate aim of the piece is to move to a position where the manual rows are totally out of phase, as happens in 8:RH5/LH6, then it would seem logical to omit more notes from the left hand. This is indeed the case—as the table above shows—but the level of phasing for most of the piece is very insignificant. Frequently one hand or the other is only ahead by one or two semiquavers until in 7:LH5 where four notes are omitted. The left hand becomes five, then six, then eight semiquavers ahead until the climactic moment of RH5 coinciding with LH6.⁴⁷ Despite the absence of a formal system for determining note omission, in the first four sections of the piece the RH rows seem to take priority over their LH counterparts. Although both rows omit notes that sound in the pedal, it is always a note in the left hand that is sacrificed if duplication occurs in the right hand. Interestingly, despite this prioritising, there are several occasions when the right hand is ahead of the left. This is in part due to duplication in the pedals but also because of the subtle overlap between RH4 and RH5, which has been mentioned earlier; in effect, even a full statement of RH5—there are three (see Fig. 8.2)—contributes to phasing. In sections 5 and 6 the left hand takes priority over the right hand on three occasions, but thereafter the right hand yields only to the pedal.

Another small event that affects the phasing occurs in 2:RH2. Here, the first note (D-flat) is omitted because it is sounding in the pedal line. Messiaen then goes on to omit its second note (F-sharp) to avoid an immediate repetition of this pitch class since RH1 ended with F-sharp; therefore, the overlapping approach seen between RH4 and RH5 can be applied here also. This section is reproduced in Ex. 8.9.

⁴⁵ See Trawick, 'Serialism and Permutation', Table 6, p. 30.

⁴⁶ Trawick, pp. 28–29.

⁴⁷ This moment coincides with the pedal's final (elongated) note and is the technical climax of the piece. See Ex. 8.10.

Ex. 8.9 'Les Yeux dans les Roues': Avoiding pitch-class repetition

The musical score consists of two systems. The first system, labeled RH1 and LH1, shows the first eight notes of a row. The right hand (RH) part is in the treble clef, and the left hand (LH) part is in the bass clef. The second system, labeled RH2 and LH2, shows the continuation of the row. The right hand (RH) part is in the treble clef, and the left hand (LH) part is in the bass clef. The score includes fingerings, a 'Db Ped (1)' marking, and a 'F# Repetition (2)' marking. The right hand (RH) and left hand (LH) parts are clearly delineated.

It was mentioned earlier that an explanation for how the piece ends—specifically with reference to the final pedal note—would be proffered. Messiaen carefully ensures that at the moment RH5 and LH6 coincide in the eighth section, the last pedal note is already sounding (bar 72, by one semiquaver).⁴⁸ The left hand is about to complete its eighth full statement so, to avoid the sense of finality that might have been created had the music ended here, Messiaen continues for three more bars. At the point where the music abruptly comes to a halt, the right hand is one note short of completing 9:RH2—it is missing its final C—and the left hand has just stated the first note of 9:LH4 [see Ex. 8.10]. There is a form of symmetry to this: one full row separates the note that would complete 9:RH2 and the note that starts 9:LH4. It could be argued that the purpose of this is to create

⁴⁸ In 8:LH5 Messiaen omits the eighth note (B) for no apparent reason. If the note were played it would not duplicate anything in the right hand or pedals. One possible explanation might be that the note is dropped to avoid a repetition occurring in the right hand since its next note is also B. But there are many instances of pitch class repetition between the hands throughout the piece. This differs from the example cited earlier (2:RH2, shown in Ex. 8.9) where a note was omitted to avoid repetition within the row.

the feeling that hypothetically, although the end of the piece has been reached in the physical sense, the music could continue for some time or even to infinity.

Ex. 8.10 'Les Yeux dans les Roues': Ending

The musical score for 'Les Yeux dans les Roues': Ending consists of two systems of piano music. The first system is divided into two measures. The first measure contains RH5 (Right Hand 5) and LH6 (Left Hand 6). The second measure contains RH6 (Right Hand 6) and LH1 (Left Hand 1). The second system is also divided into two measures. The first measure contains RH1 (Right Hand 1) and LH3 (Left Hand 3). The second measure contains RH2 (Right Hand 2) and LH4 (Left Hand 4). Various annotations are present throughout the score, including 'D Ped (10)', 'D Ped (6)', 'D Ped (1)', 'F RH (10)', 'C RH (9)', 'D Ped (3)', 'D Ped (5)', 'D Ped (12)', and 'G RH (5)'. A boxed note in the left hand in the last bar of the second system is highlighted, representing one of three instances where Messiaen has broken his rule of avoiding pitch class duplication.

The boxed note in the left hand in the last bar of Ex. 8.10 represents one of three instances in the piece where Messiaen has somehow broken his rule of avoiding pitch class duplication: the D in 9:LH3 is glaringly sounding in the pedal. If Messiaen had omitted the note, the left hand material would have ended on the second note of LH4. All that this seems to upset, it could be argued, is the notion of symmetry referred to above. The other instances of note duplication are to be found at 4:LH4 F (11) and 4:LH5 E-flat (7), both of which duplicate a note already sounding in the pedal (these are marked in Fig. 8.2). There seems to be

no logical explanation for this—could it simply be an error?⁴⁹ There are also two instances of a slight reordering of a row: in 6:LH5 E-flat to E should be E to E-flat (6-7), and in 8:LH3 C to E-flat should be E-flat to C (2-3). Again there seems to be no logical explanation for this.⁵⁰

Messiaen's avoidance of closure in 'Les Yeux dans les Roues' is reminiscent of the first movement of the *Quatuor pour la fin du Temps*, written ten years earlier. It will be recalled from Chapter 4 that in 'Liturgie de crystal' the rhythmic and harmonic pedals do not run their full course. The crucial difference between these two pieces is that in 'Les Yeux dans les Roues' there is a sense of semi-closure because the pedal line has run its course. However, at the same time, Messiaen manages to eschew this feeling of closure or finality by inserting the performance direction *couper brusquement* and insisting that there be no *rallentando*. This gives the impression of a piece that could continue for some time but is cut short. Boulez makes the comment that none of the pieces in the *Livre d'orgue* 'have an end, in the rhetorical sense; they simply stop.'⁵¹

In conclusion, it is Messiaen's specific adherence to avoiding pitch duplication that generates the composition of 'Les Yeux dans les Roues'. The symbolism of the title—'The Eyes in the Wheels'—is superbly evoked by Messiaen and eloquently expressed by Trawick:

The tempestuous energy of the piece evokes the awesome vision of Ezekiel, the source of the title and epigraph of the piece. Yet the music of 'Les Yeux dans les roues' goes beyond an effective rendering of the programmatic affect: its technical features are an appropriate metaphor for the specific details as well. The biblical text speaks of celestial beings whose appearance and whose work were 'as it were a wheel in the middle of a wheel' (Ezekiel 1:16). What better way to depict the turning of the wheels than with musical lines that cycle through their material repeatedly? What better way to depict the more specific vision of a wheel inside a wheel than with the cycling of different material at different rates?⁵²

From an aural and performing perspective this piece appears very complicated and rather overwhelming when, in fact, the processes at work are once again relatively straightforward. The twelve-tone rows in the manuals, despite commencing on successive notes of the chromatic scale, exude an improvisatory

⁴⁹ The possibility of Messiaen making a mistake should not be discounted since this is not the first time an anomaly has occurred: see the discussion on the missing chord from the 'Liturgie de Cristal' (in Chapter 4), and the incorrect note/duration in *Cantéyodjayâ* (in Chapter 5).

⁵⁰ Trawick also comes to this conclusion. See p. 30.

⁵¹ Boulez, 'The Utopian Years', p. 414.

⁵² Trawick, p. 33.

freedom that contrasts with the strict permutations in the pedals. That Messiaen continually cycles through twelve twelve-tone rows is in itself novel, but it is possible to suggest, albeit in a slightly different context, a link with the color and talea approach of earlier works. Because of the avoidance of the pitch class duplication, which results in the omission of notes from the manuals due to the pedals' supremacy, the dyads between the hands are continually refreshed and give rise to new amalgamations. This provides a further contrast to the 'closed' nature of Messiaen's interversion techniques, whereby a relatively small amount of material is generated before the point of departure is arrived at once again. All things considered, 'Les Yeux dans les Roues' ranks as a very successful piece of music. Coupled with the great organ works of the 1930s, it also solidifies Messiaen's position as the leading organ composer of the twentieth century.

8.3.4 *Messiaen's Analysis*

The *Livre d'orgue* commands a large section of Volume III of the *Traité* but the section on 'Les Yeux dans les Roues' once again disappoints. After several introductory paragraphs on Ezekiel's vision, and its depiction in various paintings, Messiaen finally declares that the piece is written in 'a very special dodecaphonic language'⁵³ and prints the first row of the right hand (portée supérieure), left hand (portée médiane) and the pedal. No explanation is given to the twelve-tone material of the right and left hands and, as I have already stated, extensive analysis reveals no relationship between any of the twelve rows, although Allen Forte may soon clarify this. Instead, Messiaen chooses to write about the blatantly transparent pedal line and rehash issues and concepts that have already been discussed in great detail elsewhere in the *Traité*, such as the idea of fixed duration and register (as seen) in *Mode de valeurs*. Of greater interest, it could be argued, is the manuals' material. I suspect readers would have preferred to gain an insight into this: what exactly is this 'very special serial language'? Just because the rows are made up all twelve semitones and Messiaen avoids pitch-class duplication, neither of these makes the piece 'serial'. Johnson, in his overview of twelve-tone writing in the *Livre d'orgue*, uses the phrase 'different arrangements of the notes for each successive twelve-

⁵³ 'un langage dodécaphonique très spécial', *Traité*, III, p. 215.

note set'.⁵⁴ It would have been better and more accurate if Messiaen had used such a phrase rather than allude to something that, with the weight of history behind it, has very specific technical connotations: 'dodecaphonic'.

8.4 'Pièce en Trio' (I)

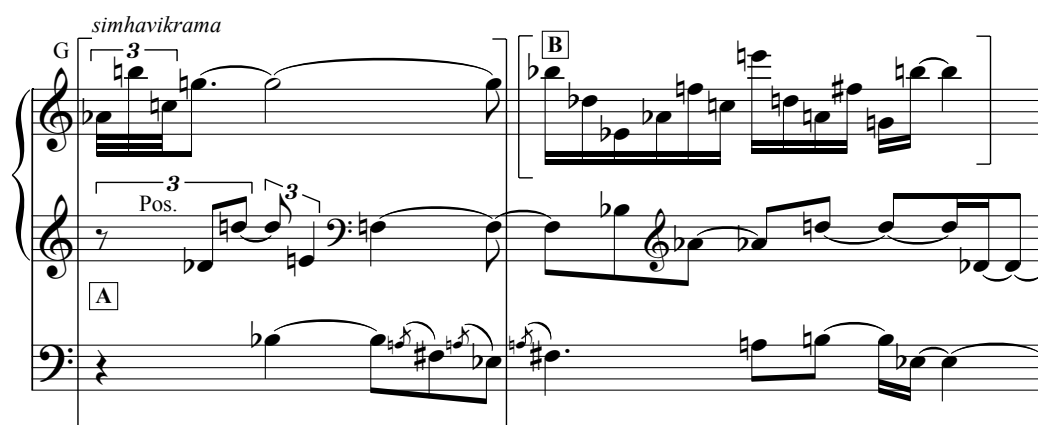
In dedicating the two 'Pièce en Trio' movements to the Holy Trinity, Messiaen returns to the Christian symbolism so prevalent in his works up to 1949. The employment of a trio obviously highlights the Father, Son and Holy Spirit in Christianity, and Messiaen's use of it can be traced back to *Les Corps Glorieux* (also for organ) from 1939. The first 'Pièce en Trio' has the biblical quotation 'For now we see through a mirror, dimly' from St. Paul's *First Letter to the Corinthians*, and the score indicates it is for Trinity Sunday. Messiaen says that it was difficult to depict the darkness and that he only managed to write a short 'unremarkable' dodecaphonic piece.⁵⁵ However, care needs to be taken in attaching the label 'dodecaphonic' since this term refers to a specific way of treating a twelve-tone series, namely through the techniques of transposition, inversion and their retrogrades. An examination of the opening of the first 'Pièce en Trio' (piece 2 of the *Livre d'orgue*) certainly reveals that Messiaen employs series of twelve notes but, since the rows are not related, it is incorrect to suggest that Messiaen uses traditional serial techniques. Ex. 8.11 reproduces the first bar.

Two twelve-tone rows (marked A and B) are presented here. In the first part of the bar, marked by brackets, no two notes are struck at the same time, which makes it a straightforward task to reproduce the twelve-tone row (Ex. 8.12). (There are in fact 13 pitches because of the repeated A grace note in the pedal line.) In the second part of the bar there is a distinct twelve-tone row (marked B) in the upper voice. The material in the left hand and pedal at this point cannot be analysed as part of a twelve-tone row because many of the pitches present here are repeated very quickly in the next bar (not shown in Ex. 8.11).

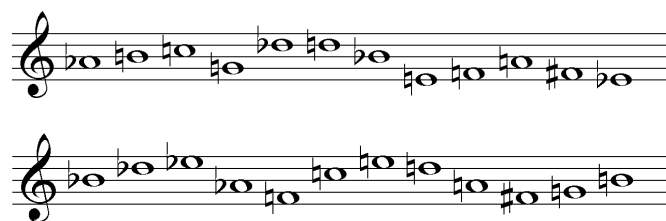
⁵⁴ Johnson, p. 113.

⁵⁵ *Traité*, III, p. 181. Johnson also notes that this trio employs a twelve-tone series.

Ex. 8.11 'Pièce en Trio' (I): Opening



Ex. 8.12 'Pièce en Trio' (I): 12-tone Rows in Bar 1



Analysing the rows extrapolated in Ex. 8.12 above reveals that no matter what method of manipulation is applied, be that inversion, retrograde, or permutation, they cannot be related to each other. In addition to sharing much in common with the second 'Pièce en trio' (piece 5), there is also a link with the sixth piece, 'Les Yeux dans les Roues', where the twelve-tone rows used in 'Pièce en Trio' (I) appear in the manual parts of the later piece.⁵⁶ However, the two twelve-tone rows reproduced above are not related to any of the twelve manual or six pedal rows of 'Les Yeux dans les Roues'. (The reader can check the six pedal rows seen in Exx. 8.5 and 8.6, and the twelve manual rows seen in Ex. 8.7.) Therefore, the first half of the 'Pièce en Trio', which does employ some twelve-tone series, is perhaps freer with respect to its pitch content than Johnson's sweeping statement might imply. It is in fact only in the second half of the piece that the relationship with 'Les Yeux dans les Roues' becomes apparent. Not only does the 'Pièce en Trio' state all the manual rows of 'Les Yeux dans les Roues', but they are stated in the same chromatic ascending order: the first row begins on C,

⁵⁶ This has already been mentioned. See Johnson, p. 114.

the second on D-flat, and so on until the twelfth on B. Ex. 8.13 reproduces the entire second half of the ‘Pièce en Trio’ (page 6 in the Durand score). For convenience and consistency, the labelling of rows in Ex. 8.13 follows that of Ex. 8.7. To aid clarity, the reproduction of this excerpt excludes the *deçi-tâla* designations.

Ex. 8.13 ‘Pièce en Trio’ (I): 12-tone Analysis

The musical score for 'Pièce en Trio' (I) is presented in three systems, each with two staves (treble and bass). The first system is labeled RH1 and RH2. The second system is labeled LH1, LH2, and RH3. The third system is labeled RH4 and LH3. The score includes various musical notations such as notes, rests, and accidentals, along with 12-tone analysis labels and numbers indicating specific tones and intervals.

The image displays a musical score extract for piano and harpsichord. It consists of two systems of staves. The first system features a piano part (left) and a harpsichord part (right). The piano part includes a section labeled 'LH4' with notes 1 through 12, and a section labeled 'RH5' with notes 1 through 12. The harpsichord part includes a section labeled 'RH5' with notes 1 through 12, and a section labeled 'LH5' with notes 1 through 12. The second system features a piano part (left) and a harpsichord part (right). The piano part includes a section labeled 'RH6' with notes 1 through 12, and a section labeled 'LH6' with notes 1 through 12. The harpsichord part includes a section labeled 'RH6' with notes 1 through 12, and a section labeled 'LH6' with notes 1 through 12. The score includes various musical notations such as notes, rests, and articulations, as well as fingerings and articulations. Arrows indicate overlapping notes between systems.

The unfolding of the twelve twelve-tone rows begins in straightforward manner with RH1. The next two rows [RH2 and LH1] also fit neatly into one bar each but see Messiaen introduce a slight reordering of pitches, which creates minute retrograde readings (see, for example notes 9 to 10 of RH2 and 6 to 7 of LH1). Thereafter the unfolding of the rows becomes more complex (and difficult to decipher). The second note, C, of LH2 is absent, although as the arrow indicates it can possibly be accounted for in the previous bar. In addition, its tenth note, A-flat, doubles as note 2 of RH3, with LH2 and RH3 clearly overlapping. Overlapping of rows and note-sharing are features of much of the rest of the piece, as are the small retrograde readings.⁵⁷ One interesting overlap occurs at the end of LH4 into RH5. It will be recalled from 'Les Yeux dans les Roues' that the final note of RH4 and the first note of RH5 was A-flat, which allowed Messiaen to overlap the rows; an examination of Ex. 8.7 shows that the last note

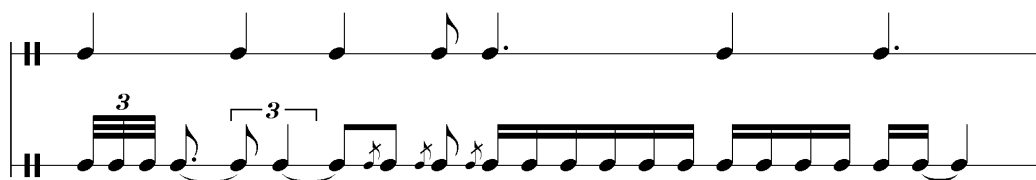
⁵⁷ In the fifth bar of the extract the E-flat in line 2 doubles as note 4 of RH4 and note 2 of LH3. At the very end of the piece/extract the final E pedal note has a dual function as note 6 of LH5 and note 9 of LH6.

of LH4 is also an A-flat. Just as Messiaen avoided repeating the A-flat in ‘Les Yeux’, in the ‘Pièce en Trio’ one A-flat suffices, acting as note 12 of LH4 and note 1 of RH5.

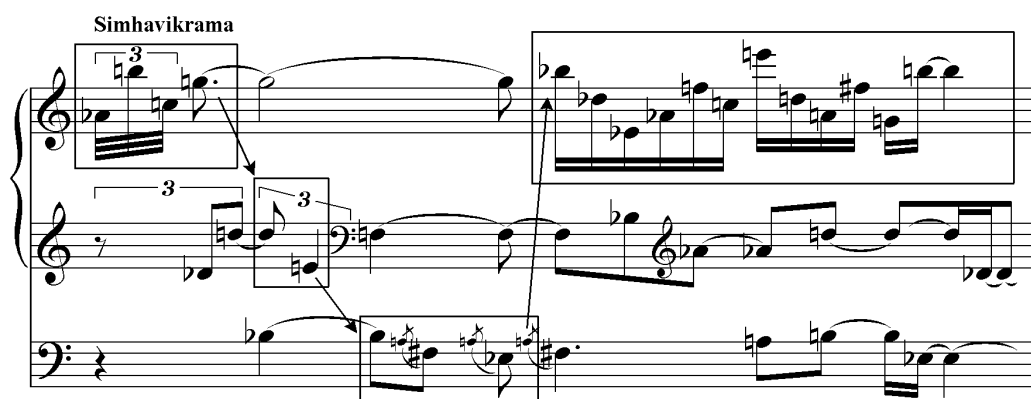
A discernable compositional approach is evident in this, the second half of the ‘Pièce en Trio’: the first twelve-tone statement is straightforward; the second includes one minor retrograde reading; as rows three to ten unfold, the music becomes more complex and increasingly contains more elaborate retrograde readings; then in the final two rows Messiaen returns to the relative ‘simplicity’ of the opening—even though the rows overlap, there are no retrograde readings.

Messiaen discusses none of the above in his analysis in the *Traité*. Again, this is very disappointing, particularly as he says that the work is ‘dodecaphonic’. His whole discussion is centred on the piece’s rhythmic structure. Messiaen’s approach is to work with modified *deçî-tâlas*, which help convey the idea of the quotation at the start of the piece: ‘Maintenant nous voyons dans un miroir, d’une manière obscure...’ (‘Now we see in a mirror, in an obscure way (dimly)’). Messiaen takes seventeen Hindu rhythms and (still maintaining their ethos or spirit) obscures them. Take, for example, the rhythm *simhavikrama*, which opens the work (seen in Ex. 8.11). In the *Traité* Messiaen quotes the rhythm in its original form. Beneath this he shows how it is broken up or ‘parsed’ and treated with irrational values; this is the form that will be used in the piece. Ex. 8.14 reproduces the rhythm and its development as seen in the *Traité*. Its deployment in the score (Ex. 8.15) is indicated by the boxed sections and arrows.

Ex. 8.14 *Simhavikrama* (original and ‘parsed’ version)⁵⁸



⁵⁸ *Traité*, III, p. 181.



The parsing takes two forms, that of subdivisions of units and their treatment with irrational values, and distributing the rhythm between the three voices. However, not all the rhythms are divided between the voices; see, for example, *miçra varna* in the final bar of page 5 where the parsed rhythm unfolds entirely in the right hand and is played on the *Great*. Some of the *deçî-tâlas* undergo much more complex treatments than others, a case in point being *bhagna* ('broken/ruptured') where Messiaen employs quintuplet demisemi-quavers, triplet quavers and a grace note, while a few others undergo minimal, if any change: *lakskmîça* remains unchanged and *dhenkî* is just treated to diminution. The use of two of the three *deçî-tâlas* from 'Reprises par Interversion' (*pratâpaçekhara* and *gajajhampa*) provides a subliminal link between the two pieces but their treatment in each piece differs greatly. The 'Pièce en Trio', although initially altering some of the rhythms, simply scrolls through the series of seventeen rhythms one after another. All the transformations are accounted for in the *Traité* and it is not necessary to plough through them all here.⁵⁹ In his introduction to the piece in the *Traité*, Messiaen addresses his use of irrational rhythms in a curious hypothetical conversation, and makes a very strange reference to Leibowitz in the context of *Macbeth*:

Furthermore, the technical argument of the piece will surely offend my reader: 'Hindu rhythms, varied, parsed, and treated with irrational values.' 'Hindu rhythms, varied, parsed, very well! but why?' he'll say to me, 'why treat them with irrational values – these irrational values that you detest and against which you never cease to fight.' There are those who, paradoxically, endeavour to like what they hate, and toy with the enemy for the pleasure of contradicting themselves. 'Fair is foul, and foul is fair' say the witches in *Macbeth*. 'There is nothing beautiful or ugly in itself', says something about René Leibowitz with slightly less

⁵⁹ Ibid., pp. 181–86.

fiendishness. Curious aesthetic reversal! ... I respected, in spite of everything, the *spirit* of the Hindu rhythms that I tortured.⁶⁰

Could this possibly be a response to Leibowitz's quotation from Shakespeare discussed in Chapter 3, particularly when Messiaen says 'Curious aesthetic reversal'?⁶¹ It is difficult to interpret Messiaen's conversational thread. He seems to be implying that he has spoken out against the use of irrational rhythms, but it is not clear when or where he has done this. The above quotation is symptomatic of many parts of the *Traité*, where Messiaen wanders from one argument or thought to another.

Finally, just as in 'Reprises par Interversion', registration plays an important role in propelling the music to another aural world beyond that which a simple reading of the score can provide. The *Pedal* has a 16' bourdon, which means that the notes sound an octave lower than written. In addition, the *Pedal* is coupled to the *Swell*, which has the cymbale stop drawn. The effect of this is to create a huge gulf between the low bourdon sound and the very high partials created by the cymbale stop. The right hand plays on the *Great*, which has 16' and 4' stops drawn: the resultant pitches sound one octave higher and lower than written, once again creating a hollow effect. Finally, the left hand (*Positif*), with its quintaton, cor de nuit and nazard, does sound the written pitch but with strong fifth overtones present.

Structurally this piece is one of the most straightforward in the *Livre d'orgue* as it simply states a series of rhythms one after the other. It might be expected that this would give rise to a collage-like structure, so indicative of earlier works where ideas were juxtaposed, but because each individual rhythm is so complex the music seamlessly flows from one (rhythm) to another. In terms assessing this work's position within this short 'experimental' period of Messiaen's output, the most notable aspect of the piece is not Messiaen's

⁶⁰ 'De plus, l'argument technique de la pièce va sûrement scandaliser mon lecteur: « rythmes hindous, variés, monnayés, et traités en valeurs irrationnelles. » « Rythmes hindous, variés, monnayés, très bien ! mais pourquoi », me dira-t-il « pourquoi les avoir traités en valeurs irrationnelles – ces valeurs irrationnelles que vous haïssez et contre lesquelles vous ne cessez de guerroyer ? » Il y a des gens qui, par paradoxe, s'efforcent d'aimer ce qu'ils détestent, et font joujou avec l'ennemi, pour le plaisir de se contrarier eux-mêmes. « Le beau est laid, et laid est beau » disent les sorcières de Macbeth. « Il n'y a rien de beau ou de laid en soi » dit à peu près René Leibowitz avec un peu moins de satanisme. Curieux renversement esthétique !... J'ai respecté, malgré tout, l'*esprit* des rythmes hindous que je torturais.' *Traité*, III, p. 181.

⁶¹ In the context of this thesis, this is the second time that Messiaen has referred to Leibowitz. We encountered him earlier in Chapter 4 in the discussion of Messiaen's views on serialism. It says a lot that Leibowitz's name does not appear once in Messiaen's conversations with Claude Samuel.

working with the total chromatic scale, but his employment of irrational rhythms, which he had already explored a year earlier in the *Messe de la Pentecôte*. Griffiths, in commenting on Messiaen's 'writing non-serial music within a serial texture', hints at the reciprocity of influence that existed between Messiaen and Boulez at this time. He notes that Messiaen would have been familiar with his student's Second Piano Sonata and the Flute Sonatina, and that the use of irregular durations 'has much more of Boulez's instability [...] which he has fairly attributed to his own influence on Boulez.'⁶²

8.5 'Pièce en Trio' (II)

In conversation with Antoine Goléa, Messiaen described the 'Pièce en Trio' (II) as 'his greatest rhythmic triumph'.⁶³ Messiaen conceived this piece whilst contemplating the glaciers of Râteau, Meije and Tabuchet, which explains its character:

[...] at the same time harsh and nostalgic; the melancholic and proud outline of the main melody; the rhythmic working based on the shapes of the mountains, rocks and peaks; the clarity of the registration influenced by the dazzling visions of sun and snow.⁶⁴

Once again, registration is of crucial importance in this movement. The *Pedal*, which Messiaen describes as the *mélodie principale*, only plays stops drawn on the *Great* – two 4' stops and the *Plein Jeu*. As has been seen on many occasions before, the written pitch does not sound, and the *Plein Jeu* adds a great number of higher partials (or harmonics) to the 4' sounds. The pedal line is written in a chromatic (but not serial) idiom⁶⁵ and is the 'principal melody'; the manual lines (described as *voix supérieure* and *voix médiane* respectively) are written in 'un langage dodécaphonique', according to Messiaen.⁶⁶ The effect of the registration on the *Swell* (*voix médiane*, registered for Bourdon 16', Nazard, Octavin 2') renders the line 'absolument inexpressive'.⁶⁷ The *voix supérieure* appears in the *Positif*, which is also registered for mutation stops. In terms of analysing the

⁶² Griffiths, *Olivier Messiaen*, p. 164.

⁶³ Goléa, p. 211.

⁶⁴ ' [...] à la fois rude et nostalgique, le tour mélancolique et fier de la mélodie principale, le travail rythmique dû à la géométrie des montagnes, des rochers, des pics, la clarté dure de la registration influencée par d'éblouissantes visions de soleil et neige.' *Traité*, III, p. 196.

⁶⁵ The prominence of the F-sharp to C augmented fourth, and especially the pivotal function of the F-sharp, harks back, yet again, to earlier works.

⁶⁶ *Traité*, III, p. 196.

⁶⁷ *Ibid.*

pitch content of the manuals, the original twelve-tone row is easy to detect as it unfolds monodically in the *voix médiane*.⁶⁸

Ex. 8.15 ‘Pièce en Trio’ (II): Original 12-tone Row and Opening

This twelve-tone row is R11 of the row used in ‘Soixante-Quatre Durées’ (this will be discussed in more detail in Section 9.4.1) and also appeared in ‘Les Mains’. The opening P0 statement is followed by RI5 and then P1, all of which overlap by two notes; that is, notes eleven and twelve of P0 double as notes one and two of RI5, and likewise in rows RI5 and P1. Conveniently, Messiaen is able to state the opening three rhythms (*laya*, *bhagna* and *niççanka*) one to a bar. Thereafter, when the counterpoint begins, he once again resorts to writing in a notional 2/4 time signature. The entry of the *voix supérieure* occurs with pitch seven of P1 (the twelve-tone material is shared between the two voices), which uses the rhythm *rangapradîpaka*. The next twelve-tone statement is RI6, which overlaps with the final two notes of P1. At this stage it might appear as if a straightforward unfolding of the twelve-tone material were going to happen: the order P0/RI5 followed by P1/RI6 has a familiar Schoenbergian structure to it (see the *Klavierstücke* Op.33a), although the hexachords of Messiaen’s rows cannot be related by Schoenberg’s technique of hexachordal combinatoriality. Alternatively, might the overlapping of rows be a nod to Webern’s technique? Probably not, although we have seen Messiaen overlap rows when the last and

⁶⁸ Griffiths also highlights the ease of determining this row given its monodic unfolding. See *Olivier Messiaen*, p. 163.

first notes of adjacent rows are the same. In any event, the twelve-tone row in 'Pièce en Trio' (II) is not symmetrical; strict/intricate Weberian canons are therefore not possible.

Returning to the analysis, an examination of the final two notes of RI6 (C-sharp and F) prompts the analyst to look for the notes F and C-sharp at the start of a row. Interestingly, these are the first two notes of P2, and notes three and four also follow in the score. However, the fifth note of P2 is D and in the music there is a B sounding at this point. A glance at the subsequent pitches reveals that Messiaen did not use P2 here. Abandoning the two-note overlap reveals that Messiaen in fact employs R6. Continuing the pitch analysis reveals the possibility of row I10 coming next; this row overlaps with the final two notes of R6 but its deployment is not straightforward. For example, the eighth note of I10 is F-sharp but this appears as the first note of the pedal part and is absent from the manuals, unless the held F-sharp (note eight of R6), which overlaps with notes one to four of I10, is accepted as a note that assumes two functions. It seems logical to conclude that the F-sharp in the pedal line could be interpreted as being part of the serial unfolding even though it is played after the ninth note of the row. In addition, the final order of pitches in the manuals is 10 12 11, again a slight reordering. After what was a decipherable serial opening, the twelve-tone composition of the manuals' parts soon becomes obfuscated. An analysis of the rest of the movement in terms of determining which rows Messiaen uses (assuming that the pedal part plays an integral part in the serial unfolding), proves virtually impossible. (There is the issue of whether the pedal line should be included in deciphering the serial rows as Messiaen makes it clear in the *Traité* that only the manual parts are serial.) To assume that Messiaen adheres to the two-note overlapping procedure would mean that the end of I10 should create a row beginning B-D (notes eleven and twelve to be strict), which would give rise to R5. The third note of this row is B-flat (which does appear in the *voix médiane*), but very quickly this analysis collapses. There is no sign of the fourth note A and there is a repetition of note two, D. A further problem is to be found in the first bar of the second page (page 20), namely two E's in close succession.

Robert Sherlaw Johnson described this piece as the ‘only true serial movement’.⁶⁹ Undoubtedly, it starts in this manner but neither he nor Messiaen give a satisfactory account of the entire movement. Paul Griffiths, in noting that the structure of the prime row ‘includes two each of minor thirds, major thirds and [presumably he means ‘perfect’] fourths, and three minor seconds’ goes on to suggest that the series is ‘knitted across the three voices in concurrence with Schoenbergian rather than Weberian practice’ and that ‘modal features are brought about in a way that appears more consistent and therefore more obviously conscious than in *Mode de valeurs*. Splitting the total chromatic across the three voices clearly allows the possibility of concentrating particular pitch classes or particular intervals in particular voices [...]’⁷⁰ I would take issue with Griffiths’s assertion that the ‘total chromatic’ is spread ‘across the three voices’. It is worth reiterating Messiaen’s description of the material: ‘The upper voice and middle voice use a dodecaphonic language. The main melody (assigned to the pedal) is drawn very melodically; it is only chromatic.’⁷¹ As there is virtually no discussion of the pitch content (the exception is the discussion of pedal theme: see the next paragraph), it may be that Messiaen forgot how he wrote the piece.⁷² As my analysis showed, deciphering the twelve-tone rows gradually becomes impossible without recourse to some (but not all) notes from the pedal line.⁷³

Messiaen quotes the pedal theme, which lasts from the second last bar on page 19 to the seventh bar on page 20. He then talks through its other occurrences, discussing the various developments in terminology reminiscent of the *Technique de mon langage musical*.⁷⁴ Messiaen acknowledges that the combination of a chromatic pedal line (with two pivot notes) and two other serial

⁶⁹ Johnson, p. 113.

⁷⁰ Griffiths, p. 163. It should be stressed that neither Johnson nor Griffiths analyse the pitch content in any great detail and there is obviously a great tendency in such publications to make sweeping statements that are rarely followed up with analytical examples. In Griffiths’s defence, with respect to the modal attributes of the serial unfolding, he notes the statistical unlikelihood of the preponderance of fourths and fifths in the manual parts in places.

⁷¹ ‘La voix supérieure et la voix médiane utilisent un langage dodécaphonique. La mélodie principale (confiée à la pédale) est très dessinée mélodiquement; elle est seulement chromatique.’ *Traité*, III, pp. 196–97.

⁷² Messiaen does not even quote the original twelve-tone series. All annotations in the score point to the durations of units within the various *deçî-tâlas*.

⁷³ As far as can be ascertained, no one has published a detailed analysis of the pitch content of this piece. I hope to do so in the near future.

⁷⁴ *Traité*, III, p. 197.

voices might seem surprising, but the interest does not lie in this (well it would, if the lines behaved as Messiaen described them); for Messiaen, the rhythm is of greater interest. Not the first time, it is extraordinary that Messiaen goes on to discuss the intricate rhythmic composition of the upper two voices and goes into no detail whatsoever as to their pitch composition. As the brief comments on these voices' rhythmic composition will show below, the fact that the processes Messiaen uses have already been explained in considerable detail in his analysis of 'Reprises par Interversion' leaves the reader somewhat frustrated. It seems futile to rehash the same rhythmic mantra over and over again when, for the first time ever, Messiaen acknowledges that the material in the upper two voices is written in a serial manner. But, exactly what is this serial manner? The piece did begin with the unfolding of traditional twelve-tone rows but, as my analysis demonstrated, this disintegrated very quickly. To suggest that the material's only interest lies in its rhythmic unfolding is surely very one-dimensional.

As already alluded to, Messiaen's rhythmic approach is very similar to that seen in 'Reprises par Interversion', in which various *deçî-tâlas* are treated as *personnages rythmiques* with the ordering of the rhythms then determined by interversions. As in 'Reprises', the permutation of three rhythms will give rise to six unique orderings. The important distinction in the 'Pièce en Trio' (II) is that there are two voices, each of which states three *deçî-tâlas*. Because the length of the rhythms in the lower voice (the voice that starts the piece: see Ex. 8.15) are longer than those of the upper voice, coupled with the fact that the level of augmentation is much greater, Messiaen has to state the interversions of the *portée supérieure* three times in total (normal, retrograde, normal), but he omits immediate repetitions of a rhythm; for example, *caccarî* is the final rhythm stated at the end of the first set of interversions, so the retrograde of these interversions begins with the preceding rhythm, which means that *caccarî* effectively doubles as the end of one interversion and the start of the other. Messiaen stresses that it is just the order of the rhythms that is retrograded, not the actual rhythms.⁷⁵

To give an idea of how dramatic a change the augmentation of values has on a rhythm, Ex. 8.16 shows the *deçî-tâla laya* in its original form and part of its

⁷⁵ Ibid.

final version after each unit has successively been augmented by seven demisemiquavers on each repetition.

Ex. 8.16 *Laya*: Normal and Final Augmentation (first three durations) in the score



It is worth quoting Messiaen's concluding comments, as they come across as a 'defence' of the work:

If we dismiss some *a priori* views/assumptions: the traditional harmonists who want to find chord sequences when there are none; the serialists who are profoundly shocked by the mixture of chromaticism, pivot notes, and dodecaphony; and finally those who have declared that all modern music was absurd, dissonant and useless; we are in the presence of some people of good will (particularly the young) to whom one has said that there were rhythms to hear, who make great efforts to hear these rhythms and don't hear them. Among these last listeners, one can also make a distinction: those who were very bothered by the timbres of the three voices (these timbres, very different from one another in fact help with the perception of the polyrhythms – their individual complexity and crossing over disturbs these weak listeners) – the others who cling to the most bustling melodic movements; the *Laya tala*, which is long and undergoes considerable augmentations, degenerates for them into interminable held notes that are absorbed in the resonances of the other voices; it therefore stops them being perceived – finally, the best advised locate the rhythm *Caccari*, which is made up of two short values repeated eight times: its negligible augmentation (one demisemiquaver per value per repetition) is fairly easily heard on account of the eight repetitions of the two values each time. After these demoralising observations, permit me two assertions! Firstly, I have always played the 'Pièce en trio' very rigorously, despite the difficulties of independence and balance which are presented, playing each duration very exactly, with scrupulous precision – if all performers played like me, after several readings and hearings, that's to say with a little practice and familiarisation the (*sic*) listeners must hear the rhythms, the transformations of the *personnages rythmiques* and the polyrhythms. Secondly, and I have already said it, and I repeat it, because I am certain: even if one finds the music of this long piece ugly and useless, it constitutes one of my greatest rhythmic victories. [...] ⁷⁶

⁷⁶ 'Si nous écartons quelques *a prioristes*: les harmonistes classiques qui veulent absolument trouver des enchaînements d'accords là où il n'y en a pas, les sériels qui sont profondément choqués du mélange chromatisme-notes pivot-dodécaphonisme, et enfin ceux qui ont décrété que toute la musique contemporaine était absurde, dissonante et inutile: nous restons en présence de quelques personnes de bonne volonté (surtout les jeunes) à qui on a dit qu'il y avait des rythmes à entendre, qui font de grands efforts pour entendre ces rythmes, et ne les entendent pas. Parmi ces dernier auditeurs, on peut encore faire un départage: les uns sont très gênés par les timbres des 3 voix (ces timbres très différents les uns des autres aident, en vérité, à la perception de la polyrythmie – leur complexité individuelle et leurs croisements troublent cependant ces

To conclude, it could be argued that Messiaen has done the very thing that he had earlier criticised serial composers for doing: it seems that their ‘unilateral interest in pitch’ is now mirrored by Messiaen’s unilateral interest in rhythm. It is surely rather dogmatic Messiaen to suggest that when listening to this particular piece the listener should focus his/her attention on the rhythmic unfolding. Messiaen overlooks the fact that, whether he likes it or not, a listener will still be drawn to how the music sounds with respect to its pitch content. Rhythm is dependent on antecedent and consequent, whereas a sound can exist independently of what comes before and what follows. The listener will inevitably be drawn to certain combinations of sounds, be they linear unfoldings or resulting horizontal amalgamations. Messiaen’s comments at the end of his analysis of the ‘Pièce en Trio’ (rather than being illuminating or informative) come across as arrogant and naïve. The information in the score (labelling the *deçî-tâla* and giving the durations of each note) and in the *Traité* seems to be purely for the benefit of the performer: Messiaen offers no practical advice to the listener. It is rather imperious to suggest that if all performers played like him, ‘after several readings and hearings, [...] the listeners **must** [my emphasis] hear the rhythms, the transformations of the *personnages rythmiques* and the polyrhythms.’

In assessing the compositional merit of this trio, Messiaen can certainly be commended for its rhythmic intricacies but, as is the case with so much of his music, the force or idea that drives the rhythmic unfolding is itself very straightforward. Once the process is started there is very little composing to do: the result is predestined. What is not predestined is the deployment of the serial rows: although the piece begins with rows that overlap by two pitches (which

auditeurs défaillants) – les autres s’accrochent aux mouvements mélodiques les plus remuants ; le Laya-Tâla, qui est long et subit des augmentations considérables, dégénère pour eux en d’interminables tenues qui rentrent dans les résonances des autres voix, il cesse alors d’être perçu – enfin, les plus avisés repèrent le rythme Caccarî, qui est fait de deux valeurs brèves 8 fois répétées ; son augmentation infime (1 triple croche de plus par valeur à chaque répétition) s’entend assez facilement à cause des 8 répétitions des deux valeurs, dans chaque terme. Après ces constatations déprimantes, qu’on me permette deux affirmations! Premièrement: j’ai toujours exécuté la « Pièce en trio » très rigoureusement, malgré les difficultés d’indépendance et d’équilibre qu’elle présente, jouant chaque durée très exactement, avec une précision scrupuleuse – si tous les exécutants font comme moi, après plusieurs lectures et plusieurs auditions, c’est-à-dire avec un peu d’exercice et d’accoutumance, lers (*sic*) auditeurs *doivent entendre* les rythmes, les transformations des personnages rythmiques, et la polyphonie. Deuxièmement: je l’ai déjà dit, et je le répète, parce que j’en suis sûr: même si on trouve la musique de cette pièce longue, laide, et inutile, elle constitue une de mes plus grandes *victoires rythmiques*. *Traité*, III, p. 204.

should theoretically make the selection of rows automatic), this quickly disintegrates. As a result, Messiaen's analysis is incomplete (and misleading: is the pedal line part of the serial unfolding?); readers of the *Traité* are left wondering. In the fullness of time, I am sure this will be addressed.

CHAPTER NINE

Livre d'orgue: pieces 3, 4 and 7

9.1 Introduction

This chapter will examine the three remaining pieces in the *Livre d'orgue*. With the exception of the final piece, 'Soixante-Quatre Durées', there is a quasi-programmatic aspect to the pieces; the pieces discussed in the previous chapter all had technique at their core. Even the evocative 'Les Yeux' is a *tour de force* in terms of its technical accomplishments.

9.2 'Les Mains de l'Abîme'

The title of this piece, which translates as 'The Hands of the Abyss', evokes the text of Habakkuk, chapter 3, verse 10, which Messiaen quotes at the start of the score: 'the deep uttered its voice and lifted its hands on high'.¹ Messiaen explains that the inspiration for the piece comes from the Dauphiné Mountains, with which he was familiar from an early age. Messiaen symbolically hears this text in the pits and precipices of mountains, rather than in the more literal context of a deep ocean. It is, for him, humanity's cry to God. In the *Traité* Messiaen recalls the text of the song 'Montagnes' from *Harawi*, which sums up the vivid colours, harsh terrain and vivid scenery of the mountains.²

'Les Mains de l'Abîme' consists of four main sections with short transitions between them. The opening section consists of three ideas played to three *deçî-tâlas*. It begins with rich chords played on full organ, depicting the 'Cry of the Abyss', to the rhythm *Manthikâ (1)*.³ This is followed by two notes in the pedal, which outline a major seventh (C to B), played to the rhythm *Manthikâ (2)*. A final sequence of chords, to the rhythm *Mallatâla*, completes the material.⁴ Messiaen's by now familiar employment of three *deçî-tâlas* produces six possible permutations, the first three of which are used in the first section of the piece. However, the rhythms are not treated as *personnages rythmiques* because,

¹ 'L'abîme a jeté son cri! La profondeur a levé ses deux mains!' The full text of this line reads as follows: 'The mountains saw thee, and they trembled: the overflowing of the water passed by: the deep uttered his voice, and lifted up his hands on high.' (King James version.)

² See Messiaen, *Traité*, III, p. 187.

³ For a discussion of these chords, see Allen Forte, 'Messiaen's Chords, pp. 91–113 (pp. 92–94).

⁴ Messiaen returns to using chords (such as the 'chord on the dominant' with chromatic appoggiaturas), which are more characteristic of his style in the period up to 1949.

although one remains unchanged (*Manthikâ (I)*), the other two augment by a demisemiquaver with each repetition. Messiaen highlights that he used *Manthikâ (I)* in an exaggerated form. Its original form is a crotchet, semiquaver and a dotted crotchet, which in essence reads as ‘long-short-long’. Messiaen maintains this ethos/character but greatly elongates the longer durations and makes the short duration even shorter.⁵ The original and exaggerated versions can be seen in Ex. 9.1. The numbers above the notes represent duration in demisemiquavers.

Ex. 9.1 *Manthikâ (I)*: Original and Modified/Exaggerated Version



One of the problems with the above rhythm is that because the second note is so short in relation to the others, an exact or accurate performance (if one were possible) would create a smudged effect, given the acoustics of most churches. In Messiaen’s recording of this piece he clearly articulates the move from the first chord to the single demisemiquaver chord, the effect of which renders the second chord much longer in proportion to the first, and by implication, the third.⁶

Before the start of the second section, Messiaen inserts two transitional bars (Ex. 9.2). Messiaen describes these bars as a premonition of an intense emotion he would feel two years later when, sleeping at a high altitude behind the Râteau glacier, he heard the terrifying cry of an Alpine Chough (Chocard des Alpes)⁷ which sent shivers down his spine.⁸

⁵ *Traité*, III, p. 189.

⁶ EMI CDZ 7 67401 2

⁷ A full list of bird name translations is to be found in Appendix III of Johnson’s *Messiaen*, pp. 211–23.

⁸ *Traité*, III, p. 190.

Ex. 9.2 'Les Mains de l'Abîme': Transitional Bars

Presque lent

Pos. *più f* *mf* *p legato*

With a strong emphasis once again on registration, Messiaen describes the short passage:

Two dissonant dry chords, in the upper register of the Positif, played on 16' quintaton, nazard 2 2/3, tierce 1 3/5, gives this high-pitched impression [...] Out of this effect, the voix humaine with nazard, 16' bourdon, produces a moving (touching) and solemn lining with sustained sounds. In the middle, resonance in double notes by a 4' flute in the pedals (sounding an octave higher than written). A melodic garland around A-flat, on the flute on the Great, completes the sonority.⁹

The second section sees Messiaen depicting the 'supplication of the deep'. This begins as a form of duet: the deep is symbolised by the Voix humaine, 16' bourdon and nazard played in the lowest register of the *Swell*, the effect of which reminds Messiaen of the sounds that are heard in the Lamaserie of Tibet;¹⁰ against this the right hand plays on the *Positif*, with the highest stops of the organ (piccolo and tierce), symbolising for Messiaen the Divine response to the lamentations of mankind. The right hand then moves to the *Great* where a variation of the melodic garlands seen in the two-bar transition is heard, again pivoting around A-flat. The tempo of this section is marked 'très lent', which is perhaps not prescriptive enough on Messiaen's part given that in his recording of

⁹ 'Deux accords dissonants, sec, dans le haut du clavier du Positif, joués sur quintaton 16, nazard 2 2/3, tierce 1 3/5, rendent cette impression suraiguë [...] De cet effet, la voix humaine avec nazard et bourdon 16, donne une doublure émouvante et grave, en sons tenus. Au milieu, résonance par la flûte 4 de Pédale en doubles notes (8^{ve} aiguë du son écrit). Une guirlande mélodique autour de la bémol pivot, sur la flûte du Grand Orgue, complète le tableau sonore.', *Traité*, III, pp. 190–91.

¹⁰ Ibid., p. 191. A lamaserie is a monastery of lamas.

this piece the speed is incredibly slow: the semiquaver equals approximately 55 beats per minute.¹¹

The third section, which is essentially a development of the second, begins on page 9 after another statement of the two-bar transition. This is by far the most substantial part of the piece. The contrast between the ‘deep’ and the very high voice continues here but the melodic garlands idea, of which there are eleven (all distinct), now weaves its way through the texture.¹² The registration is the same as the second section and, with that in mind, it is worth notating exactly how the music sounds. This will demonstrate the huge gulf between the low notes on the *Swell* and the high notes on the *Positif*.

Ex. 9.3 ‘Les Mains de l’Abîme’: Resulting Sounds in Section III

tierce 1 $\frac{3}{5}$
(Pos.) piccolo 1
P

(Great) bourdon 8
P

(la profondeur)
nazard (Swell)

voix humaine (Swell)
bourdon 2 x 16 (Pedal)
bourdon 32 (Pedal)

f legato

The layout of Ex. 9.3 differs slightly from what is presented in the score: it represents the actual sounding pitches. The melodic garlands are written in the top stave and are to be played by the right hand, with the left hand playing the

¹¹ Because there are no metronome markings on the score it would be difficult for a performer to know just how slow Messiaen wanted this section to be played. The movement of ‘the deep’ in crotchets could perhaps have been better depicted by using minims and semibreves, with all the other material adjusted accordingly. This is effectively what Messiaen did when he revised *Le Banquet célesté*, because he felt that performers were playing the piece too fast.

¹² *Traité*, III, p. 191.

high notes on the *Positif*. In the above excerpt the melodic garlands of the right hand sound as written because the *Great* is registered with an 8' bourdon. The written notes in the *Positif* do not sound because the stops drawn are a piccolo, which sounds three octaves higher than written, and a tierce, which sounds a seventeenth higher than written. Finally, the *Pedal* has three low stops drawn, a 16' bourdon, 16' soubasse, which sound an octave lower than written, and a 32' bourdon, which sounds two octaves lower than written. The pedals are also coupled to the *Swell*. This means that the stops drawn on this manual, Voix humaine (with tremolo), 16' bourdon, and a nazard (which sounds a twelfth higher than written), sound when the pedals are played. The colossal gulf between the sounds on the *Positif* and the pedals can clearly be seen as they make use of the highest (piccolo) and lowest (32' bourdon) stops of the instrument.

Both Griffiths and Johnson make interesting observations about this section. Griffiths notes that 'the central episode divides the twelve notes among its three voices, so that the bass uses the group C-sharp-E-F-F-sharp-G to march up and down in scales through a tritone, the treble makes neumes out of the remaining notes A-B-flat-C-D-E-flat-A-flat-B, the middle voice makes decorative patterns of mediation.'¹³ His assertion of the pedal outlining a tritone is correct but Messiaen's description of the surrounding material as 'melodic garlands' seems more appropriate than 'neumes'. The most important feature of these is that they also outline the interval of the augmented fourth (A-flat to D). Griffiths's singling out of certain pitches, which are the complement of the pedal's notes, does not take into account that some of the pitch classes in the pedal are to be found in the midst of these melodic garlands. Finally, Johnson correctly notes that one of these 'florid decorative sets' becomes the 'sole twelve-note series of the fifth movement (page 9, end of system 2 into 3).'¹⁴ (This twelve-tone row is reproduced in Ex. 8.15). The melodic figure in question actually occurs in bar 2, which straddles the second and third systems on page 9. Ex. 9.3 (above) gives a flavour of Messiaen's use of irrational values. Seven demisemiquavers in the time of eight is the most prevalent; others include ten

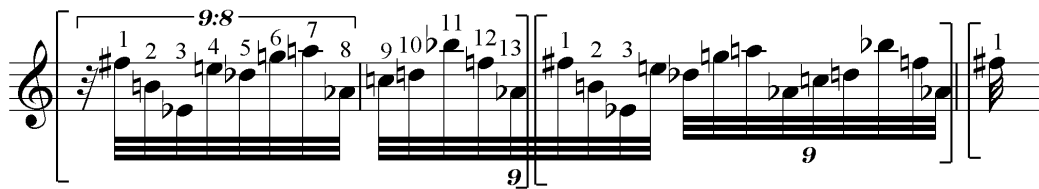
¹³ Griffiths, *Oliver Messiaen*, p. 161.

¹⁴ Johnson, *Messiaen*, p. 113.

hemi-demisemiquavers in the time of eight, 5 hemi-demisemiquavers in the time of four, and nine demisemiquavers in the time of eight.

From the start of the final system on page 10 Messiaen unfolds a thirteen-note series (a prime number) in nonuplet demisemiquavers. An examination of Ex. 9.4 below reveals that all twelve semitones are used. The thirteenth note (A-flat) is a duplication of note 8. Messiaen states this melodic figure five and a half times in total.¹⁵ While this is happening on the *Great*, the very low and very high material mentioned above continues as normal.

Ex. 9.4 'Les Mains de l'Abîme': 12/13-tone Nonuplets



The final transitional passage sees a monodic flourish for full organ, which begins with two twelve-tone statements (not related to one another or to the twelve-tone garland in Ex. 9.4) but thereafter becomes freer. This leads into the final section of the piece where the remaining interversions explored in Section I are played out.

In conclusion, 'Les Mains de l'Abîme' contains a curious mix of styles, from the treatment of *deçê-tâlas* in interversions, to the depiction of the Abyss by exploiting the rich sonorities available on the organ, and the whole thing bound together by the short transitional section depicting the terrifying cry of an alpine bird (not notated or mentioned as birdsong in the score). The pitch content of the work also mixes the rich chords so associated with Messiaen in the 1930s and 1940s, with freer twelve-tone material (not serial, or derived through interversions). The rhythmic unfolding throughout is marked by the use of irrational durations and the contrasting of very short and very long durations. This latter characteristic reaches its apotheosis in the final movement, 'Soixante-Quatre Durées'.

¹⁵ *Traité*, III, p. 191.

9.3 ‘Chants d’Oiseaux’

At the time of composing this piece, Messiaen had been transcribing birdsong for fifteen years and with the help of the ornithologist and poet Jacques Delamin had learned to identify different birdcalls.¹⁶ In his introductory remarks to this piece in the *Traité*, Messiaen goes to great lengths to justify its inclusion (in the context of its being in praise of God; it is intended for Eastertide, according to the score). Wai-Ling Cheong describes this piece as Messiaen’s ‘first attempt to “saturate” a piece with birdsong’ and also notes that the *Livre d’orgue* sees Messiaen start his practice of specifying bird names in the score.¹⁷ The main birds depicted in the piece are the blackbird, the song thrush and the nightingale. Messiaen relates these birds to springtide and the occurrence of Easter (the most solemn yet joyous period in the Christian calendar), which occurs during the period 22 March to 25 April, depending on the moon’s cycle. The early days of March see the song thrush ‘launch into admirable solos (full of) unexpected rhythms’; robins and blackbirds are prevalent in April; the nightingale, which abounds in May, can occasionally be heard during April nights.¹⁸ For Messiaen, a bird’s flight and song symbolise ‘mystical escape, religious joy and spiritual freedom’¹⁹ and the contours of their melodies are to be found in plainchant neumes. Since all creatures are invited to praise God, he continues, ‘why not admit these alleluia-istic melodies? [...] Birdsong is the model, the source of all music [...] it is] purifying, pacifying and comforting’.²⁰

In a layout that recalls the mosaic/collage-like structure of *Cantéyodjayâ*, Messiaen juxtaposes the free birdsong material with a *deçî-tâla*, *miçra varna*, whose components is treated to permutation. Up to now, interventions have been applied to groups of rhythms; now Messiaen treats the units of *miçra varna* to permutation. Messiaen uses a slightly modified version, as can be seen from Ex. 9.5.

¹⁶ Ibid., p. 193.

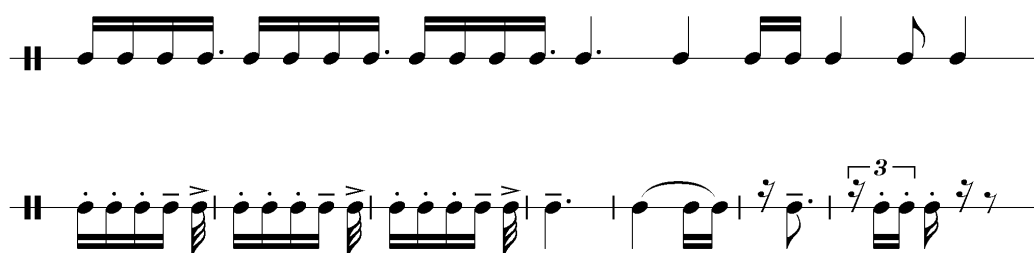
¹⁷ Wai-Ling Cheong, ‘Neumes and Greek Rhythms’, (pp. 1, 13). Cheong’s article includes a table which lists works that depict birdsong. In the works leading up to the *Livre d’orgue* many of the birdsongs are unspecified; however, some are specified in the *Vingt regards* and the *Messe*.

¹⁸ *Traité*, III, p. 192.

¹⁹ ‘[...] l’évasion mystique, la joie religieuse, la liberté spirituelle.’, *Traité*, III, p. 192.

²⁰ ‘[...] pourquoi ne pas admettre ces mélodies alleluiantes ? Le chant d’oiseau est le modèle, la source de toute musique [...] purifiant, pacifiant, consolant.’ *Traité*, III, p. 192.

Miçra varna: Original and Messiaen's version²¹



The first four semiquavers are heard on an 8' bourdon on the *Great*, which sounds *piano*; the final demisemiquaver (exhibiting the qualities of a dynamic accent) is heard on the *Pedal*, which is slightly louder than the preceding notes. Accompanying the rhythm is a very quietly held dyad on the *Swell*, which sounds an octave lower than written (16' bourdon) and contains many higher partials with the employment of the cymbale stop. It produces, according to Messiaen, a 'scintillating and very clear timbre.'²² The entire first bar is stated three times before a solitary dotted crotchet sounds on the *Positif*, registered for clarinette and 16' quintaton. Messiaen describes this as a 'profound timbre, somewhat cavernous, nasal and sombre'.²³ The end of the *deçî-tâla* is marked by a mixture of all three timbres, before the final three notes are punched out on the *Positif*. Interestingly, Messiaen uses the term 'klangfarbenmelodie' to describe the colouring process. His assignation of different colours to different parts of the rhythm, which remains fixed throughout the piece, is also an 'unconscious, unintentional homage' to *miçra varna* which means 'mixture of colours'.²⁴ All of the above can be seen in action in Ex. 9.6, which reproduces the opening of the piece.

²¹ These are reproduced in the *Traité*, III, p. 193.

²² 'timbre scintillant, très clair.', *Traité*, III, p. 193.

²³ 'timbre profond, un peu caverneux, nasillard et sombre.', *Traité*, III, p. 193.

²⁴ 'mélange des couleurs', *Traité*, III, p. 193.

Ex. 9.6 'Chants d'Oiseaux': Opening

Modéré (*rythme hindou miçra varna*)

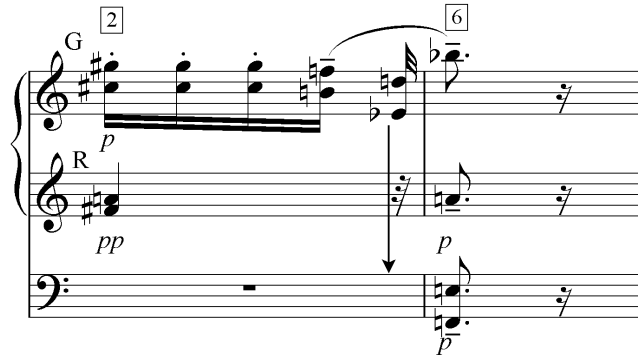
(0,1) Occurrences

As mentioned earlier, *miçra varna* acts as a refrain and is heard before each of the birdsong sections. Its second appearance, on the second system of page 14, sees a straightforward retrograde of the first version. This is a true retrograde insofar as the material within each bar is also stated backwards, which differs from the other interventions later in the piece. For example, its third appearance, starting on the sixth system of page 15, involves reading the original presentation from the extremes to the centre, not on a note-to-note basis but on a bar-to-bar basis. It therefore contains a mixture of normal and retrograde readings: bar 1 normal, bar 7 retrograde, bar 2 normal, bar 6 retrograde, bar 3 normal, bar 5 retrograde and bar 4 normal.²⁵ There are two very slight differences to the opening material. The dynamic accents of bars 2 and 3 in the *Pedal* are moved to the *Great* in this intervention. There seems to be no logical reason for Messiaen to do this, although, as Ex. 9.7 below shows, he inserts slurring from the final

²⁵ Ibid., p. 195.

semiquaver of the group of four to the B-flat at the beginning of the next bar. In addition, it will be noted that the held dyad in the *Swell* is cut short by one demisemiquaver, perhaps to make the ‘dynamic’ accent more pronounced.

Ex. 9.7 ‘Chants d’Oiseaux’: Altered Refrain (page 15)



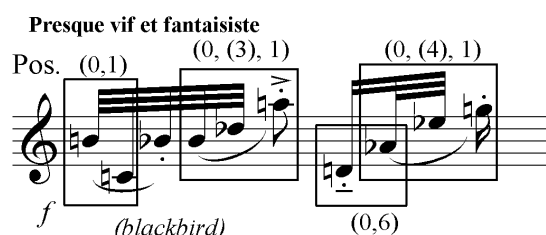
The final statement, commencing at the top of page 18, involves reading the original presentation from the centre to the extremes on a bar-by-bar basis. Once again this produces a mixture of normal and retrograde readings: bar 4 normal, bar 3 retrograde, bar 5 normal, bar 2 retrograde, bar 6 normal, bar 1 retrograde, bar 7 normal.²⁶ And again, Messiaen makes some minor modifications: the dyads in the *Swell* are shortened by a demisemiquaver and the dynamic accents are moved from the *Pedal* to the *Great* in two of the three appearances (only bar 3 of the original preserves the pedal accent).

The birdsong material after each of the *miçra varna* refrains evokes the blackbird, nightingale, song thrush and robin, all of which appear juxtaposed with one another as well as having substantial solos. No birds are presented simultaneously, which makes these sections monodic. However, despite the monody, the use of registration, (particularly mutation stops, which produce a preponderance of fifths, octaves and seventeenths), creates a richer texture than might first be gleaned from merely looking at the score. As ever, the registration plays a crucial role in depicting the various birds. Once a bird’s registration has been assigned, it remains unchanged for the rest of the piece. In terms of the

²⁶ Ibid.

pitch content of the birdsong, a few issues are worth highlighting.²⁷ The first scene is that of a spring afternoon at the edge of a wood. The three main birds (all, but the robin) have relatively short statements which, for Messiaen, was indicative of this time of day since ‘they are not the long solos that signal the dawn of the day or nightfall.’²⁸ Messiaen says that the blackbird begins with two twelve-tone unfoldings. Interestingly, the first of these is one of Messiaen’s favourites: a wedge-like shape (open fan) reading left to right starting on the note B. Discounting register (and the repeated B-flat), the row reads as follows: B-C-Bb-Db-A-D-Ab-Eb-G-E#-F (the first nine notes of this row can be seen in Ex. 9.8 below). The second twelve-tone unfolding does not have a discernable structure. An examination of the opening gestures of the blackbird shows a penchant for outlining major sevenths (0, 1); the augmented fourth (0, 6) is also prominent.

Ex. 9.8 ‘Chants d’Oiseaux’: Opening birdsong



Before the second bird’s entrance (the nightingale) Messiaen inserts a short three-note motif in the *Pedal*. This is used throughout to separate the individual birdsongs. Messiaen says that he heard this sound whilst notating the birdsong but that he didn’t quite know what it was. He suggests it may have been a crow, branches rubbing against one another, or just the wind.²⁹ The motif is registered for an 8’ cello stop in the *Pedal*. Once again, the intervals of the augmented fourth (0, 6) and minor ninth (0, 1: an inversion of the major seventh) are prominent. These are marked in Ex. 9.9. This motif heralds the entrance of a new bird: the nightingale. Marked ‘Très modéré, tendre’, the nightingale is registered

²⁷ The birdsong material will not be discussed in detail as much of the material is free and is not indicative of Messiaen’s methods of writing with twelve tones in this period.

²⁸ ‘[...] ce ne sont pas les longs solos qui saluent la naissance du jour et la tombée de la nuit.’,

Traité, III, p. 194.

²⁹ Ibid.

with 4' flute, 2' octavin and 16' bourdon, which gives it a 'hollow' sound.³⁰ More importantly, it outlines the interval of a major seventh. This interval forms the basis for all of its brief strophes until a new repeating note idea is seen on page 17. Of the four birds depicted, the nightingale's strophes are by far the shortest, and it is only on the final page, where a solo for the nightingale ends the piece, that this bird gets to sing more varied material. This, though, is heavily based on the major seventh and repeating note ideas.³¹ Returning to the opening birdsong passage, Messiaen brings in the song thrush after the one-bar pedal idea. Registered for Plein Jeu (which is the most brilliant of the mixture stops) and a 4' clarion (a trumpet stop), this creates a rich scintillating sonority and its loud volume contrasts greatly with the nightingale and pedal motif. Once again, the major seventh plays a pivotal role. The final bird to enter (in this the first birdsong section) is the blackbird (only the first bar of its music is reproduced in Ex. 9.9). The most prominent intervals are the augmented fourth and minor ninth, which has a strong correlation with the short pedal motif. Messiaen's concentration on 'dissonant' intervals in his depiction of birdsong is partly due to the fact that birds do not sing in equal temperament and it should be stressed that the written intervals are only approximations.

It is also possible to relate the intervals created by pitch classes 0, 1 and 0, 6 to the *miçra varna* refrain. A glance at Ex. 9.6 reveals a preponderance of the pitch class combination 0, 1. It is especially notable in the first three bars (bars two and three are a repetition of bar one) where the pedal's sole contribution is the dynamic accent at the very end of the bar. The interval continues to be prominent throughout the remainder of the pedal line, in the final notes on the *Positif*, and in all the voices in bar 5. The augmented fourth (B to F (0, 6) of the blackbird in Ex. 9.9 is the same as the final semiquaver dyad in the *Great* in bars 1 to 3 (see Ex. 9.6).

³⁰ Ibid.

³¹ Gillian Weir notes how the nightingale's soft treatment on the organ becomes 'loud and fierce' in the piano music. See 'Organ Music II', in Hill, *Messiaen Companion*, p. 371.

Ex. 9.9 'Chants des Oiseaux': Excerpt of First Birdsong Section

the sleeping landscape, prolonging the inseparable scents and the winding³⁴ of dreams, it was there, always singing, the invisible nightingale...³⁵

‘Chants d’Oiseaux’ marks the start of what would become a decade of birdsong works in Messiaen’s output. In the context of the *Livre d’orgue*, the piece therefore looks ‘forward’, but the use of a *deçi-tâla* (*miçra varna*) looks to the past. That said, it is treated in a new way: this is the first time that Messiaen has treated one rhythm with interversion techniques. There is also cohesion between *miçra varna* and the birdsong material in the subtle pitch class relations.

9.4 ‘Soixante-Quatre Durées’

The final piece that makes up the *Livre d’orgue* is, without doubt, Messiaen’s most ambitious project in the deployment of chromatic rhythm. As its title indicates, Messiaen works with a chromatic scale of durations ranging from one to sixty-four demisemiquavers (or from one demisemiquaver to a breve). The succinct epigraph at the top of the score summarises the approach: ‘64 chromatic durations, from 1 to 64 demisemiquavers – permuted in groups of four from the extremes to the centre, alternating reading forwards and backwards – treated in a retrograde canon. The whole inhabited by birdsong.’³⁶ Before examining the compositional process in some detail it is worth bringing some of Messiaen’s thoughts on the piece, as recounted in the *Traité*, to the fore.

Although the number sixty-four is not a large number in the context of mathematics, it is a ‘considerable’ number for a musician or rhythmist says Messiaen. In searching for sixty-four different rhythmic units, Messiaen acknowledges that these would not be found in the Hindu ragas or even amongst the works of the young serial composers who ‘believe themselves obliged to work with 12 durations, following my *Mode de valeurs*, even though that in fact

³⁴ The French word ‘enroulement’ is difficult to translate. ‘Winding’ in this context means the detection of something by scent.

³⁵ ‘Mon interprétation reprend très fidèlement les roulades, les batteries, et les changements de sentiment de l’artiste nocturne. La poésie de l’heure et du lieu rendaient plus belle encore l’improvisation originale : veilleur de nuit du Printemps, voix du paysage endormi, prolongeant les parfums complices et l’enroulement des rêves, il était là, chantant toujours, le Rossignol invisible...’ *Traité*, III, p. 195

³⁶ ‘64 durées chromatiques, de 1 à 64 triple croches – interverties par groupes de 4, des extrêmes au centre, droits et rétrogrades alternativement – traitées en canon rétrograde. Le tout peuplé de chants d’oiseaux.’ Epigraph on score.

made use of 24'.³⁷ It is possible to imagine infinitely long and short durations but more difficult to distinguish between durations that differ by a very small amount. Messiaen illustrates this point by referring to the two longest durations used in the piece: sixty-three and sixty-four demisemiquavers respectively. He then highlights durations of seventeen and forty-one demisemiquavers (both prime numbers) and suggests, somewhat unconvincingly, that these are also difficult to distinguish.³⁸ Given that there is a substantial difference between these two numbers it is more likely that what Messiaen is getting at is the listener's inability to specifically identify these durations. Just as in his comments on the 'Pièce en Trio' (II) (where Messiaen advised people to play the piece like him so that it could be comprehended), Messiaen suggests that more education and exercise are the keys to comprehending (or hearing) the processes at work in 'Soixante-Quatre Durées'). According to Messiaen, our problems with such complex music stem from our historical conditioning:

The habits of Westerners (2 and multiples of 2) stem from the military march ('quick time'); their knowledge of ternary stems from the religious concept of Perfection; the failures of memory (which) only recalls that which is already known; all of this considerably impairs their hearing of simple durations not divisible by 2 or 3. One can assume that durations transmit by hearing (noise or sound), by seeing (colour or gesture), or merely thoughts: in all cases the Westerner's perception of duration is very weak if it is not based on 2 or 3, or their multiples. Orientals are not burdened like us by combinations of sounds: the great difficulty of harmony and counterpoint does not exist for them: so they gain on one thing while losing on another, for they hear perfectly rhythms that would be impracticable to us. Now, the Orientals are people like us; what they do, we can do; it's a question of education and exercise.³⁹

Messiaen's criticism of Westerners' inability to differentiate between durations did not stop him writing a piece that, I suspect, would challenge the cognitive powers of our Oriental brothers and sisters. To be fair to Messiaen, he was concerned that not only would the listener be unable comprehend the durations

³⁷ ' [...] qui se croient obligés de fonctionner sur 12 durées, à la suite de mon "Mode de valeurs et d'intensités", lequel en utilise en fait 24.', *Traité*, III, p. 225.

³⁸ All the above is a paraphrased translation of p. 225.

³⁹ 'Les habitudes des Occidentaux (2 et multiples de 2) issues de la marche militaire ("pas cadencé"); leur connaissance du ternaire, issue de l'idée religieuse de Perfection; les défaillances de mémoire qui n'enregistre que ce qu'elle connaît déjà ; tout cela nuit considérablement à leur audition de durées simples mais non divisibles par 2 ou par 3. On peut supposer des durées transmises par l'ouïe (bruit ou son), par la vue (couleur ou geste), ou seulement pensées : dans tous ces cas la perception des durées est très faible chez les Occidentaux, s'il ne s'agit pas de 2, 3, et leurs multiples. Les Orientaux ne sont pas encombrés comme nous par les combinaisons de sons : le grand embarras de l'harmonie et du contrepoint n'existe pas pour eux : aussi ont-ils gagné d'un côté ce qu'ils avaient perdu de l'autre, car ils entendent parfaitement des rythmes qui nous seraient impraticables. Or les Orientaux sont des hommes comme nous : ce qu'ils font, nous pouvons le faire : c'est une question d'éducation et d'exercice.' *Traité*, III, p. 225.

but that they would also be bored.⁴⁰ To counter these concerns, he introduced birdsong gestures. There are no references to specific birds, although some familiar birdcalls arise by coincidence. This was ‘destined to help the listener appreciate the excessively long durations and make the work more attractive.’⁴¹

9.4.1 *Rhythm and Pitch*

Despite the apparent complexity of the rhythmic unfolding, the compositional procedure is straightforward and builds on the permutation techniques Messiaen had already explored in earlier works of this period. Messiaen’s rhythmic analysis can be summarised as follows:

- (i) A chromatic scale of sixty-four durations (from one to sixty-four demisemiquavers) was created.
- (ii) The durations were then grouped in fours by reading from the extremes to the centre resulting in a series starting 61 62 63 64 and 4 3 2 1. This mixture of normal and retrograde readings creates the effect of a fan emanating from the extremes to the centre. Messiaen describes this as ‘an interversion of the chromatic scale by reading from the extremes to the centre, but in an order which is: 4 by 4 in retrograde symmetry’.⁴²
- (iii) Once the process described in (ii) is complete, the resulting series of numbers is stated in retrograde.
- (iv) The act of composition sees the series created in (ii) and (iii) superimposed on one another.⁴³ Messiaen notes that this creates ‘a rhythmic canon by retrograde movement’.⁴⁴

Whatever about an individual’s ability to distinguish between subtly different durations there can be no expectation that this rhythmic canon will be perceived

⁴⁰ *Traité*, III, p. 226.

⁴¹ ‘[...] destinés à faciliter l’appréciation des durées trop longues et à rendre l’ouvrage plus attrayant.’, *Traité*, III, p. 226.

⁴² ‘[...] une interversion de la gamme chromatique par lecture des extrêmes aux centre, mais dans un ordre qui est : 4 par 4 en symétrie rétrograde.’, *Traité*, III, p. 220.

⁴³ Messiaen explains all these stages in considerable detail going so far as to translate all the numbers into their respective rhythmic units by writing out the result of the first permutation process, its retrograde and the superimposition of both; it is all a bit excessive. *Traité*, III, pp. 220–25.

⁴⁴ ‘[...] un canon rythmique par mouvement rétrograde.’ *Traité*, III, p. 220.

by the listener. It should also be stressed that, because Messiaen strictly adheres to what the mathematical processes produce, the act of composition (in terms of the deployment of duration) becomes totally automatic. The only way he can attempt to make the various durations perceptible is to articulate them with freer material (birdsong) or parsing (this will be discussed below). Somewhat paradoxically, though, Messiaen suggests that the specific permutation process, in combination with the resulting retrograde, creates certain oppositions, superimpositions and other encounters that can actually help the listener appreciate the durations.⁴⁵ It is all very well making such an observation but whether this is borne out in practice is quite another matter. In terms of the evolution of Messiaen's compositional language, there is an important aesthetic difference between the processes established here and, for example, the harmonic and rhythmic pedals of 'Liturgie de crystal'; in 'Soixante-Quatre Durées' the process is allowed to run its course: the permutation of the sixty-four durations determines the length of the piece, whereas in earlier works the automatism of color and talea was used to generate substantial amounts of material without the need for the process to self-terminate. It is interesting that, in the works of this period (1949 to 1952), Messiaen chooses to allow most processes to run their entire course. This is true of the interventions in *Île de feu 2* and even in 'Les Yeux dans les Roues', despite the elongation of its final pedal note.

The other process at work is the unfolding of serial twelve-tone material (this is indicated by the numbers in normal typeface in Ex. 9.11). The original row is reproduced in Ex. 9.10A. Ex. 9.10B reproduces P11: if this is read backwards (i.e. R11) it will be seen that this is the same row that Messiaen used in 'Pièce en Trio' (II) (for convenience I have reproduced this in Ex. 9.10C).

Ex. 9.10A 'Soixante-Quatre Durées': 12-tone Row



⁴⁵ *Traité*, III, p. 226.

Ex. 9.10B 'Soixante-Quatre Durées': R11



Ex. 9.10C 'Pièce en Trio' (II): P0 = R11 of 'Soixante-Quatre Durées'



Ex. 9.11 (below) reproduces the opening of the work, written as usual in the notional time signature of 2/4. The permutation processes are to be found in the outer voices played on the *Swell* and *Pedal* respectively (the numbers in bold represent durations from the permutations). The *Swell* begins with the first permutation process (61 62 63 64 4 3 2 1 and so on), while the *Pedal* states this permutation in reverse (29 30 31 32 36 35 34 33 and so on). Once again, through the use of registration, a reading of the score only reveals a small part of overall effect created. The *Swell* (*Récit*, notes in line 1) is registered for 16' and 8' bourdons, and a 2' octave. Messiaen highlights how the bourdons are among the softest stops of the organ and therefore this top line sounds *pianissimo*. The *Pedal* has a single 4' flute, which sounds one octave higher than written, and is slightly louder than the *Swell*. Because of its pitch sounding an octave higher, and the 16' bourdon on the *Swell* causing its notes to be doubled one octave lower than written, the two lines continually crossover with respect to their sounding pitches.⁴⁶ Since these stops remain drawn for the entire piece, the timbre of the permutations in the outer voices remains fixed throughout.

⁴⁶ Ibid., p. 227.

Ex. 9.11 'Soixante-Quatre Durées': Opening with 12-tone Analysis

The musical score for 'Soixante-Quatre Durées' by Messiaen, showing the opening with 12-tone analysis. The score is in 2/4 time and features a Récit section. It includes piano (pp), forte (f), and mezzo-forte (mf) dynamics. The analysis is marked with numbers 1 through 12, indicating the twelve-tone series. The score is divided into two systems, each with three staves (treble, bass, and a lower bass staff). The first system is labeled 'Récit 61' and the second system is labeled '62'. The score includes various musical notations such as notes, rests, and dynamic markings.

Messiaen, as is customary in the *Traité*, devotes very little time to discussing the pitch content; he believes that once he has explained the process (which he describes as childishly simple), 'it is pointless to continue'.⁴⁷ (I would argue that he could have applied the same logic to many of the rhythmic analyses in the *Traité*. As I have highlighted on numerous occasions, there is no need to go beyond, for example, the third inversion in discussing a rhythmic device; once the basic process has been explained or illustrated it seems excessive to laboriously wade through the rest.) Messiaen's analysis here is slightly more informative than that of other so-called 'serial' piece, 'Pièce en Trio' (II). Essentially each twelve-tone derivative (be that transposed, inverted, and/or their retrogrades) of the original row is deployed vertically in the four long held notes (the duration series in the *Swell* and *Pedal*) and horizontally in the middle voice,

⁴⁷ '[...] celle-ci étant d'une simplicité enfantine, il est inutile de continuer [...]', *Traité*, III, p. 227.

which evokes birdsong or ‘parses’ the long values.⁴⁸ Although, initially, the long notes make up the first four notes of the twelve-tone row, Messiaen regarded this as somewhat ‘paralysing’ so this approach was occasionally abandoned in favour of full twelve-tone statements in the middle voice.⁴⁹ The deployment of the first two twelve-tone rows and part of the third can be seen in Ex. 9.11: P0, I0, R1.⁵⁰ Given the enormous lengths of some of the notes, some pitches double as one note in one row and another in a subsequent row. This is the case for the held G in the *Swell*, whereby it is initially note 1 of P0 (bar 1) and then note 1 of I0 (bar 2). Messiaen’s analysis continues by highlighting two more rows: P9 and RI1 before he feels there is no need to continue.⁵¹

Messiaen says nothing about the order in which the many twelve-tone rows are deployed; neither does he mention that there is a relationship between the row used in this piece and that used in the ‘Pièce en Trio’ (II). David Crean notes that Messiaen ‘does not limit himself to a few rows exhibiting strong musical affinity but uses many, exhibiting no tendency toward particular index numbers or transformations.’ He concludes that Messiaen’s choices are based on voice-leading and ‘the needs of the birdsong’.⁵² Crean also claims that the piece ends with R0 (R7 in his labeling), which reinforces the ‘retrograde canonic form’.⁵³ This is correct, insofar as in the fourth last bar the pedal plays notes 1, 2 and 3 of R0; these notes are then followed by nine other unique pitches (but not in the order dictated by R0). (Once again, the numbers in bold Ex. 9.12 represent the unfolding/permutation of the sixty-four durations; numbers in normal typeface represent the unfolding of R0.)

⁴⁸ *Traité*, III, p. 226.

⁴⁹ *Ibid.*

⁵⁰ Messiaen labels these rows as follows: P0 is ‘Original I’; I0 is ‘Contraire I’; R1 is ‘Rétrograde 2’. *Traité*, III, pp. 226–27.

⁵¹ These rows are labelled ‘Original X’ and ‘Rétrograde du Contraire XII’ by Messiaen. *Traité*, III, p. 227.

⁵² David Crean, ‘Style and Structure in Messiaen’s *Soixante-quatre Durées*’, *The American Organist*, 42 no. 12 (2008), 90–93 (p. 91). Crean’s labeling of the twelve-tone rows is a little confusing. The original twelve-tone row can be seen in Ex. 9.10 beginning on ‘G’. As this is pitch class 7 (starting with zero on ‘C’), Crean labels this row as P7.

⁵³ *Ibid.*

Ex. 9.12 'Soixante-Quatre Durées': Ending

Messiaen divides this final row into four trichords: notes 1, 2, 3; 9, 10, 11; 4, 7, 8 and 5, 6, 12. The first two trichords have the same prime form: set 3-4 [0, 1, 5]; the final two trichords (the notes in the treble staves) also share the same prime form: set 3-5 [0, 1, 6]. The chords overlap and the texture increases, stating three, then six and finally nine notes of the row simultaneously. An examination of these chord amalgamations also reveals connections (see Ex. 9.13). The first hexachord is set 6-7 [0, 1, 2, 6, 7, 8]; the second hexachord (the two trichords in the treble staves) is also 6-7. (The final nine-note set (created by the amalgamation of the second hexachord and the held trichord in the pedal) is 9-4 [0, 1, 2, 3, 4, 5, 7, 8, 9].)

Ex. 9.13 'Soixante-Quatre Durées': Pitch Class Analysis of Ending

As I highlighted earlier, the piece began with straightforward unfoldings of twelve-tone rows but that this soon disintegrated. Attempting to decipher what row is being used where is as difficult an exercise as was encountered in the 'Pièce en Trio' (I) (see Ex. 8.13).

Not for the first time in his analysis of works of this period Messiaen uses the term 'monnayage'. The meaning of the term (discussed in Section 8.2) is best understood by examining what is happening in the middle voice. Essentially this 'parsed' material helps divide or break up the longer durations that surround it. Messiaen's 'monnayage' employs irrational rhythms, which have already been seen in several movements of the *Livre d'orgue* and first appeared in the *Messe de la Pentecôte*. At the start of the piece, the 'parsing' consists of 'small groups of short values forming part of the very long durations, but with sufficient "gaps" so that the holding (held notes) still seems very long'.⁵⁴ Messiaen then highlights a few examples and some departures from the long held notes: page 36, bar 8, where the held notes in the *Swell* and *Great* are parsed with a mixture of demisemiquavers (rational and irrational); page 37, end of bar 1, where the held duration of fifty demisemiquavers is replaced by triplet semiquavers on the *Great* and *Positif*; at the end of page 41 into 42 the pedal durations of fifty-eight and fifty-seven demisemiquavers are parsed; at the same time, durations 28, 27, 26, and 25 are parsed in a birdsong manner, which results in the whole texture being parsed. On the final page the sustained durations are just that: Messiaen does not parse them.⁵⁵ Johnson points out that the durations are 'coloured' in three different ways: (i) by timbre (registration); (ii) by harmony (the sustained chords); (iii) by the birdsong (middle voice). In this respect the piece anticipates the Strophes of *Chronochromie*, written in 1960.⁵⁶

Finally, Messiaen highlights the fact that the birdsong material is merely evocative and not literal, although coincidental similarities do arise. When they do, Messiaen annotates the score appropriately; see, for example, page 40, system 3, where the nightingale makes an appearance.⁵⁷ His choice of registration for the birdsong and parsed material mirrors that seen in other

⁵⁴ '[...] en petits groupes de valeurs brèves s'insérant dans les très longues durées, mais laissant suffisamment de "blanc" dans la tenue pour que celle-ci paraisse encore très longue.' *Traité*, III, p. 228.

⁵⁵ The above observations are a paraphrase of Messiaen's analysis in *Traité*, III, p. 228.

⁵⁶ Johnson, *Messiaen*, p. 115.

⁵⁷ *Traité*, III, p. 228.

movements. The *Positif* has the following stops drawn: clarinette, nazard, quintaton and 16' bourdon, which results in a piquancy of fifths. A similar effect is created on the *Great*, which also employs a nazard-like stop (the quinte), but lacks the reedy quality of the clarinette.

9.5 Concluding Comments

An inherent problem in my analysis (or anyone's, even Messiaen's) of such a piece is that it breaks the music up into constituent parts: it compartmentalises it. Griffiths comments that 'there is no evidence he [Messiaen] has given any thought to matters of perception'. The problem with such 'automatic' music is that no particular moment was ever truly envisaged by the composer: it just happens. Griffiths applies the same argument to traditional and total serialism:

[...] serialism, for the first time since the Renaissance, provided composers with the means by which music could be structured without reference to how it would sound, and the addition of serial controls on rhythm, loudness and colour only exaggerates the dislocation.⁵⁸

Griffiths does not suggest that any of this weakens Messiaen's music (in particular, this piece and its equally abstract counterpart, 'Reprises par Interversion'). Commenting that the listener may be aware that a 'structure is being worked', he notes that

the effect can only be to demonstrate that a demonstration is taking place, and this does not destroy the value of the music but rather allows one to see it as the repository of experiences that the mind struggles against all the odds to apprehend: experiences of the supernatural or of supernatural discrimination. [...] for not only is arithmetic an image of divine perfection but the aural understanding of arithmetic is as much a challenge to the mind as the understanding of God.⁵⁹

Speaking to Antoine Goléa about the complex rhythms and the use of irrational values in 'Soixante-Quatre Durées', Messiaen comes across as being very frustrated by people's reactions. Goléa recreates Messiaen's colourful language:

You may be asked, was this done elsewhere and, not without malice, what is the musical interest of such experiences.
These spiteful people, exclaimed Messiaen with a passion and intensity vibrating with indignation, are as a matter of fact victims of immeasurable arrogance. They make music an end in itself. They forget that in the universe music is only a small

⁵⁸ Griffiths, *Olivier Messiaen*, p. 160.

⁵⁹ *Ibid.*, pp. 160–61.

manifestation of rhythm, which would not exist without movement and change, which are themselves manifestations of time.⁶⁰

This quotation, along with several others cited from the *Traité*, portrays Messiaen as a man who is impatient with the weaknesses he sees in the people around him. The tone of the *Traité* and the conversations with Goléa are in marked contrast to the conversations with Samuel, which are (for the most part) less judgemental or critical.

There can be no doubt that much of the music of the *Livre d'orgue* is challenging: quite what one means by that could be another thesis in itself. It is only through an understanding of the technique that the music truly reveals itself. But it would be wrong to suggest that the music is only technique, despite the fact that Messiaen devoted many pages expounding his (in fact, thousands of pages are devoted to technique in the *Traité*). Boulez, who had his differences with Messiaen and then reconciled, could never fully accept this separation of technique from music and vice versa:

With him (Messiaen) there is something in his vocabulary which is strange to me. You have sometimes the music on the one hand and the technique on the other. He explains, you know, 'Here the music is this, and the technique is that.' Which is strange for me because the music *is* the technique and the technique is the music. That's like two mirrors which are parallel. That's one aspect of his thinking I could never really understand.⁶¹

The *Livre d'orgue* marks the formal end of Messiaen's 'experimental' period.⁶² His turning to nature (in particular devoting all his energy to birdsong) seems symptomatic of a man trying to reconnect with his soul and his roots. In the final decades of his life, Messiaen would also return to his spiritual roots with works such as *La Transfiguration* and *Et expecto resurrectionem*, but we should not forget that his Christian faith is still present in the radical works of 1949 to 1952. Of course, the *Messe de la Pentecôte* can be interpreted as a religious piece of music but, in comparison with the later religious works, it is more appropriate to

⁶⁰ 'On pourrait vous demander, on l'a fait d'ailleurs, et non sans malice, quel est l'intérêt musical de pareilles expériences.

Ces méchantes gens, s'écria Messiaen avec une passion et une vivacité toutes vibrantes d'indignation, sont à la vérité les victimes d'un incommensurable orgueil. Ils font de la musique une fin en soi. Ils oublient que dans l'univers la musique n'est qu'une toute petite manifestation du rythme, lequel n'existerait pas sans le mouvement et le changement, qui ne sont eux-mêmes que des manifestations du temps.' Goléa, p. 212.

⁶¹ Roger Nichols, 'Boulez on Messiaen', p. 168.

⁶² Hill and Simoene note that the work was completed after a short break in 1952 during which Messiaen composed *Timbre-Durées*. See Hill and Simeone, pp. 198–99.

place it alongside the abstract *études* and the *Livre d'orgue* because of Messiaen's ongoing research into new rhythmic techniques (Greek metrics and irrational values). The *Livre d'orgue* has several movements with overt Christian symbolism but the imagery is a far cry from that evoked in the works up to the *Vingt regards* and those that followed after 1960. There is a sense of detachment in the *Livre d'orgue*. This is something that such abstract, avant-garde music is apt to portray, but was Messiaen truly at ease in this environment? As André Boucourechliev eloquently put it: '[Messiaen] paid serialism an occasional—and brilliant—tribute. In the *Livre d'orgue* his serial writing is of exceptional virtuosity and elegance and his use of rhythm attains unprecedented richness, particularly in the 'Pièce en trio' (no. 5)'. [Despite all this] Messiaen could never have remained in such a world of abstraction.'⁶³

⁶³ Boucourechliev, 'Messiaen', p. 207.

CHAPTER TEN

Conclusions

10.1 ‘Darmstadt 1949’: Why Messiaen?

Chapter 1 charted the rapid development of musical style and language in the twentieth century. It particularly highlighted a sense of a ‘zero hour’ after the end of World War II in which composers looked at the very essence of language and technique in their quest to find a way forward. This reawakening was, in part, brought about by the renaissance of serialism and much credit is due to Leibowitz for his work in performing and writing about the music of the Second Viennese School. Messiaen’s position as a prominent teacher, performer and composer was well established by the mid-1940s but negative reactions to his music and defections by some of his students (to Leibowitz) made the second part of the decade a more tense time in Messiaen’s life. Having established a quintessential compositional language, expounded in the *Technique de mon langage musical*, Messiaen found himself on the margins of progress, and music would progress with or without him. Developments outside of France (particularly the new contemporary music festival at Darmstadt) contributed greatly to the fostering of new ideas, even if in its early years its focus was on re-assimilating the past.

Throughout the thesis I made several references to Messiaen’s experimental works looking both forwards and backwards. The radical nature of some of the composition techniques placed Messiaen at the forefront of the avant-garde. In asking, ‘Why Messiaen’, or ‘why did his music change’, I looked to theories of influence. As most theories of influence deal with ‘content’, rather than ‘style change’, it was important to show how the latter can be accounted for, in part, through influences. One of the most important conditions or requirements for validating an influence statement is that there must be change. As some aspects of Messiaen’s works from 1949 to 1952 are different to what he had written before, one aspect of the requirement of change is fulfilled.

This thesis acknowledges that certain composers and music played a part in shaping Messiaen’s musical language of the early 1940s. However, the emphasis was on trying to ascertain why Messiaen’s language changed in 1949.

To that end I identified and discussed three broader influences. First, the cultural climate after World War II (with which Messiaen was inextricably linked) and the search for a *lingua franca*; second, the constant negative criticism of Messiaen's music in the press ('Le cas Messiaen') and Leibowitz's polemical critique of Messiaen (all of which was deeply hurtful); third, the reciprocity of influence seen in the relationship between Messiaen and Boulez.

When Messiaen went to Darmstadt in 1949 and started composing *Mode de valeurs* he had no idea how influential or important the work would be. As Roger Nichols said, 'successful experiment or not, the point of interest is surely that Messiaen felt he *had* to make it.'¹ As a causal explanation, therefore, the influences on Messiaen discussed in this thesis were pivotal in its composition.

In the history of the evolution of musical language and style in the twentieth century, several composers have had central roles. For example, Hodeir sees Stravinsky, Schoenberg and Messiaen as being 'destined by their historical situation to play the difficult role of intermediaries'.² The development of total serialism in the 1950s owes much to Messiaen's *Mode de valeurs*, but in reality this work can be seen as mediating between Webern (who, for the avant-garde, was the true serialist) and what was to emerge throughout the 1950s. It was never Messiaen's intention to forge a *lingua franca*, as his reflections and those of others on this period indicate. In reading Boulez's assessment of the situation, Messiaen can almost be described as the 'reluctant avant-gardist':

Through his disciples, and through a return to sources that had hitherto played only a secondary part in his musical formation, he [Messiaen] had been brought face to face with a formal systematization of the language, and he was therefore confronted by the problem of *spontaneous* and *calculated music* and the problem of what sort of relationship was possible—even desirable—between the two. This I believe to be the dilemma that lay at the root of his activity and his thinking during this crucial phase.³

10.2 *Mode de valeurs et d'intensités*: Evolution or Revolution?

Of all the pieces discussed in this thesis, *Mode de valeurs* received the most attention because, as has been shown, it was the piece that helped define a new generation. Messiaen's approach to writing with all twelve tones stems from his

¹ Nichols, *Olivier Messiaen*, p. 49 (my emphasis).

² Hodeir, *Since Debussy*, pp. 14-15.

³ Boulez, 'The Utopian Years', pp. 413-14.

interest in chromatic rhythm, which reached its apotheosis in the *Turangalîla-Symphonie*. For example (prior to *Turangalîla*), in ‘Regard de l’Onction Terrible’ from the *Vingt regards*) Messiaen used chromatic rhythms to create the simultaneous acceleration and deceleration of material, by reading a chromatic duration series from sixteen units to one unit and vice versa. This was an important precursor to the permutational techniques that Messiaen would develop from 1949 onwards. A crucial aspect to Messiaen’s use of rhythm was its deployment in rhythmic and harmonic pedals, the result of which had the potential to create vast passages of music; such music was described as ‘automatic’. One of Messiaen’s most substantial uses of pedals was seen in ‘Liturgie de Cristal’ from the *Quatuor* (discussed in Chapter 4); paradoxically, as the decade progressed Messiaen composed even more complex pedals (frequently superimposing pedals upon pedals, discussed in Chapter 4 in the section on *Turangalîla*) but would only compose out a tiny fraction of the possible resulting music. It seems clear that Messiaen was interested in finding ways to limit the amount of material such pedals could produce, in the same way that his Modes of Limited Transposition only give rise to a small amount of transpositions before the original returns—the ‘charm of impossibilities’, as Messiaen describes it.

Chromatic rhythms had developed out of Messiaen’s interest in ametrical rhythm (the use of added values), whose origins can be further traced back to the *deçî-tâla*. By the 1940s, the ‘charm of impossibilities’ in the rhythmic domain resided in the creation of non-retrogradable rhythms. These rhythms, frequently governed by prime numbers, offered the opportunity to modify the central unit, thereby progressively elongating or shortening a particular rhythm. Messiaen took this a stage further by dividing rhythms into sections, all of which developed in different ways. His favoured approach was the *personnages rythmiques* (developed from Stravinsky’s *Le Sacre*), in which one rhythm (or part of a rhythm) is subjected to augmentation on each repetition, another is subjected to diminution on each repetition and one part remains unchanged. Messiaen’s innovative research into rhythm in the 1940s certainly places him in the ‘modernist’ camp, but there was a critical groundswell who (clearly unaware of the complexity of Messiaen’s rhythmic writing) could only hear ‘the music’

(pitch and harmony) and saw in this a composer buried in his own little world of mysticism and religion.

By 1949 the quintessential sound-world that constituted Messiaen's harmonies and melodies had not kept pace with his rhythmic innovations. It could be argued that Messiaen's obsession with rhythm was as myopic as the Viennese serialists' obsession with pitch, which he had always criticised. However, even in the sumptuous decadence (or 'hedonism', to quote Leibowitz) of *Turangalîla*, there were premonitions of a more radical avant-garde aesthetic to come: such asceticism is seen in the 'Percussion Sextet' of 'Turangalîla II' (discussed in Chapter 4).

No one can deny the radical nature of *Mode de valeurs* (insofar as its aesthetic effect appears to negate Messiaen's past), but, in truth, the creation of *Mode de valeurs* only required Messiaen to take a few small steps. The cumulative effects of these small steps, however, marked a huge leap forward: it was as if Messiaen had put a foot on the staircase only to find he was on an escalator. Put another way, the effect of the resulting piece of music was greater than the sum of its individual parts (or steps taken).

Having already worked with duration series' of over twelve values, it was a logical step to pare this down to twelve and align pitch with duration. This is what Messiaen did in *Mode de valeurs*, the components of which were tested in a short section of *Cantéyodjayâ*. It would hardly be expected that Messiaen would use a traditional twelve-tone row and its derivatives. Instead he created 'divisions' which acted as sound-banks from which Messiaen could draw on. In *Cantéyodjayâ*, Messiaen created three divisions of eight pitches, each with a unique duration (within a division). Fresh from Cage's performance of his *Sonatas and Interludes* (and Boulez's perceptive talk on the work), in *Cantéyodjayâ* Messiaen predetermined (and fixed) the sound of each pitch by giving it one of five dynamics (*pp*, *p*, *mf*, *f*, and *ff*). All that was left to do was to decide how to compose out the three sound-banks (divisions). The pre-composition of material in *Cantéyodjayâ* was methodically expanded to twelve pitches in three divisions in *Mode de valeurs*. A further development was that, in *Mode de valeurs*, a pitch's duration was determined by register. This meant that pitch was aligned to the chromatic duration series: the highest note in each

division had the shortest duration; the lowest had the longest.⁴ The final stage in the pre-composition process was determining the timbre of each note, which would remain fixed for the duration of the piece. Messiaen expanded the five dynamic markings used in *Cantéyodjayâ* to seven in *Mode de valeurs*. In addition, each note was given one of twelve articulation markings.

All this pre-composition of material is merely an extension of the pre-composition involved in Messiaen's rhythmic endeavours earlier in the 1940s. Just as the Modes of Limited Transposition (which were also pre-composed), enabled Messiaen to create certain chords, certain progressions and certain melodies, the three divisions in *Mode de valeurs* provided Messiaen with a repository of sounds to draw on. The first step had been taken: the 'total organisation' was complete; but the 'organisation' of the actual composition would prove to be a bigger step.

The detailed analysis of *Mode de valeurs* in Chapter 6 revealed that this essentially monodic piece (although exuding an improvisatory feeling and appearing 'unorganised') contains substantial sections that are governed by symmetrical (and some random) arrangements of the twelve-tone divisions. In other words, Messiaen did not just draw randomly from each of the divisions: at times he used all twelve tones (and by implication, durations) from a division or divisions. This subtle (but not expected) development offered for the first time an alternative approach to the Viennese techniques of retrograde, inversion, and retrograde inversion. The very fact that Messiaen used all the notes from a division (and avoided pitch class duplication and repetition) made a comparison with serialism inevitable; and, although Messiaen did not rate *Mode de valeurs* very highly, he is to be commended for composing such a substantial piece of music based on just three twelve-tone divisions. When Boulez heard Schoenberg's Op. 26 Wind Quintet and wanted to know how it was written, a similar thing happened when Stockhausen heard Messiaen's recording of *Mode de valeurs* in 1951. Its pointillist texture evoked the music of Webern who, as noted several times throughout the thesis, was emerging as the most influential of the Viennese serialists.

⁴ As noted in Chapter 6, this correlation only happens within each division. If the complete pitch content of the three divisions is laid out from the highest to the lowest note, there are occasional blips in the descending chromatic duration series.

From the above overview, it is possible to see *Mode de valeurs* as an evolution of Messiaen's compositional technique, but with one exception: its avant-garde aesthetic is different to what Messiaen wrote before because the Modes of Limited Transposition are gone. As a result, the melodies and harmonies so associated with Messiaen in the 1940s are suddenly absent. In addition, because the music is 'through-composed',⁵ gone is the frequent juxtaposition of ideas so characteristic of Messiaen's music prior to this. Therefore, to the next generation of composers, *Mode de valeurs* was radically new: it was a revolution.

Long before Messiaen premiered the work, or had received any feedback on it, he completed the remaining *études* and had started working on the *Livre d'orgue*. I will now draw together the analyses of chapters 7 to 9 to show how Messiaen built on the techniques started in *Mode de valeurs*, continued to respond to traditional serialism, and then applied these new techniques to some of his favourite rhythmic devices from the 1940s. The emphasis is on showing that Messiaen looks forwards, by developing and solidifying new techniques, but also backwards, in reconfiguring some of his oldest and most cherished rhythmic practices.

10.3 Refining the Technique

In *Île de feu 2* Messiaen 'formalised' his approach to writing with twelve tones. Some of the twelve-tone writing in *Mode de valeurs* was derived from permutations of the three divisions, but not all these permutations were symmetrical. Messiaen discovered that by using simple fan-shape readings he could generate a finite number of arrangements of a twelve-tone row⁶ before the original series would return. This technique would become even more prominent in the *Livre d'orgue* and would make sporadic appearances in several later compositions (most notably, *Chronochromie*). In *Île de feu 2*, the interverson/permutation technique is first used on a chromatic pitch row (a wedge shape). This permutation technique generates ten unique arrangements before the original returns. Messiaen assigns fixed dynamics and durations to each note (continuing the practice started in *Mode de valeurs*), but the effect here

⁵ The powerful low C-sharp of division 3 creates a 'sense' of three sections.

⁶ I could just as easily use the phrase 'twelve-unit duration series'.

is very different. In addition to two interversions being stated together (and played in octaves) the process is circular: in other words after a certain period of time the original row will return. This is analogous with the automatism seen in ‘Liturgie de Cristal’ but now the time taken for the process to re-coincide is dramatically reduced. The other parallel with the past (looking backwards) is the sectional nature of the work. When an interversion ends, it ends; Messiaen then moves on to something else. This was not the case in *Mode de valeurs* because the interversions in various divisions overlapped and there was much freer material around them. In addition, even if an interversion is unfolding in one of the lines, the others frequently have ‘free’ material (although I did highlight the use of some motivic writing, which resulted from Messiaen’s careful consideration of articulation and dynamics).

The main interversion theme in *Île de feu 2* alternates (and is eventually combined) with the fiery opening theme. This opening theme harks back to earlier Messiaen, with its added rhythms, violent harmonies, and angularity. In addition to the main interversion theme, several other sections are composed of twelve-tone material. In Chapter 7, I highlighted two such (contrasting) sections. The first was a short *Vif* passage where Messiaen created a reading order (a permutation not based on a symmetrical/fan-shape reading) in which no number of the permutation occupied its corresponding number in a series numbered one to twelve. In my examination of the theory of Messiaen’s interversion technique I showed that the number of resulting rows from a particular permutation operation is dependent on how numbers are mapped. If each number is mapped onto a unique number, then the number of permutations will usually equal the number of pitches in the original row. (This concept of note-mapping is best illustrated in Ex. 7.4 where all the notes are semiquavers: it is therefore easy to see the one-to-one correlation.) If a series of numbers repeats after only a few mappings, then the number of unique rows will either be reduced or increased. This is strongly linked to the ‘color and talea’ (or pedals). Things will only coincide at the point of the lowest common multiple. I gave an example of a permutation series that resulted in groups of four notes and eight notes being mapped on to one another. The LCM of four and eight is eight, which means that only eight unique rows will arise. In my second example, I modified the same permutation formula ever so slightly. This resulted in note-mapping taking place

in groups of five, three and two notes. In addition, two notes/positions were fixed. The LCM of these numbers is thirty, which means that thirty unique rows are possible. I have reiterated this detail because Messiaen does not deal particularly well with the theory in the *Traité*.

The final twelve-tone section in *Île de feu 2* sees Messiaen pre-compose ten unrelated rows (i.e. they are not created by reading one permutational ordering) and create a fascinating palindromic toccata (see Ex. 7.5). This is a good example of the new and the old. Messiaen's use of the total chromatic scale is part of his forward-looking approach but his treatment of the material is more typical of the old Messiaen. In the toccata, each row is immediately followed by its retrograde. This seems more of a nod to Messiaen's non-retrogradable rhythms than to a traditional serial retrograde reading. This is because Messiaen makes the last note of a row (12) double as the first note of the retrograde, giving a total pitch content of twenty-three notes (a prime number). After all ten rows (and their retrogrades) have been stated, Messiaen rewrites the whole passage backwards, meaning that the entire section (left hand only) is non-retrogradable. Despite avoiding permutations or serial transformations in the creation of the twelve-tone rows, Messiaen shows that a cohesive piece of music can result. As discussed in Section 7.2.3, Messiaen achieves further cohesiveness within the *études*: the total pitch content of the toccata in *Île de feu 2* is 457 semiquavers (a prime number), which is the same number (in quavers) that governs the duration of *Mode de valeurs*.

Before moving on from the *Quatre études*, it is worth recapping some of the features of *Neumes rythmiques*, which illustrate Messiaen's mixing of the old with the new. Directly linked to *Mode de valeurs* is the use of 'neumes', whose timbre is fixed for the duration of the piece, but the music is much richer here with complex harmonies and resonances that hark back to Messiaen's pre-*Mode de valeurs* language.⁷ The neumes alternate with two rhythmic ideas. The first idea augments with each repetition (see Ex. 7.19); the second idea (Ex. 7.20) is a non-retrogradable rhythm hammered out in clusters at either extreme of the piano. The total duration of the idea is forty-one semiquavers (a prime number). On its subsequent three statements, Messiaen increases the duration to the next

⁷ As noted in Section 7.3, *Neumes rythmiques* was probably the first *étude* to be concluded. Messiaen started writing it shortly after he had sketched his plans for *Mode de valeurs*.

prime number, i.e. 43, 47 and 53. Despite the small changes to each of the ideas that alternate with the neumes, there is no development of material. And, despite the fact that a lot of the neumes are repeated without change (because they are fixed for the piece), because Messiaen uses around twenty of these (and some of them are developments of others) there is a curious mismatch between this material and the two rhythmic ideas. In all the *études*, with the exception of *Mode de valeurs*, Messiaen returns to his earlier technique of juxtaposition (and non-development) of ideas. But as David Drew says, ‘Whether a work of Messiaen’s succeeds or fails, it is evident from the very start that the composer feels, in the depths of his heart and soul, the burning urgency of what he has to say. For that one can forgive much.’⁸

10.4 Radicalising the Future Through the Past

Of the *Quatre études*, *Mode de valeurs* is the most radical, but not necessarily the most organised when it comes to the material. The same level of pre-composition continues in the *Livre d’orgue* but there is a greater sense of cohesion and organisation within the music. In addition to further using interventions to generate material on the micro level (notes and durations), Messiaen also applies the technique on a macro level to rhythmic ideas and sometimes to the entire structure of the piece. What this demonstrates is that Messiaen did not simply regurgitate techniques: he was continually looking for new ways to use and expand them. The *Livre d’orgue* also sees Messiaen engage in some traditional serial writing but, as my analyses showed, this is not always easy to decipher.

Each of the seven pieces of the *Livre d’orgue* offers something new and several of them are connected with respect to the twelve-tone rows they use. In many ways the work, as a whole, is more radical than *Mode de valeurs* but (as already noted) it was less influential because it was not published until 1953 and only received its premiere in 1955. The *Livre d’orgue* is also radical in the way that Messiaen recasts techniques he had used earlier in the 1940s. With the exception of the use of serial twelve-tone rows in two of the movements, all the ‘newer’ techniques appear in different guises throughout the work. As there was quite a lot of analytical information to absorb in the previous two chapters, it will

⁸ Drew, ‘Messiaen (III)’, p. 61.

be useful to produce a table that provides a basic summary of the techniques used in each of the movements.⁹

Fig. 10.1 *Livre d'orgue*: Summary of Techniques

	Structure/Material	Comments
1. 'Reprises par Interversion'	<p>Section 1 6 12-tone rows <i>3 deçî-tâlas</i></p> <p>Section 2</p> <p>Section 3</p> <p>Section 4 (The whole piece is monodic and reads the same forwards and backwards)</p>	<p>Row 1: chromatic wedge Rows 2-6: unstructured 3 per 12-tone row 18 statements (order determined by permutations) Treated as <i>personnages rythmiques</i> Permutation of the above in the order 1 72 2 71 etc.¹⁰ Permutation of Section 1 in the order 37, 36, 38, 35¹¹ Retrograde of Section 1</p>
2. 'Pièce en Trio' (I)	<p>Page 1 12-tone rows <i>9 deçî-tâlas</i></p> <p>Page 2 12-tone rows <i>9 deçî-tâlas</i> (one repeated from page 1)</p>	<p>Unstructured Irrational values/Parsed</p> <p>Same 12-tone rows in the same order as manual parts of 'Les Yeux' Irrational values/Parsed</p>
3. 'Les Mains de l'Abîme'	<p>Section 1 <i>3 deçî-tâlas</i></p> <p>Transition</p> <p>Section 2</p> <p>Transition Section 3</p>	<p>Exaggerated; order of rhythms treated to permutations over the course of this section and S.4 Premonition of 'intense emotion' (dry chords and a melodic 'garland') 'Supplication of the Deep': vast gulf between the lines As above Dev. of S.2; melodic garlands weave through texture; irrational rhythms; 12-tone material divided</p>

⁹ This is in lieu of having to summarise each movement. Instead, I will make some general comments.

¹⁰ There are some minor alterations to this Closed Fan reading to maintain the grouping of the pitches of one of the *deçî-tâlas* (*sârâsa*).

¹¹ This is effectively a retrograde of Section 2. Again, Messiaen maintains the grouping of the pitches of *sârâsa*.

	Transition Section 4	between three voices; one garland becomes 12-tone row for 'Trio' (II) New free monodic idea Concludes processes of S.1
4. Chants 'd'Oiseaux'	1 <i>deçi-tâla (miçra varna)</i> Birdsong <i>Deçi-tâla (miçra varna)</i> Birdsong <i>Deçi-tâla (miçra varna)</i> Birdsong <i>Deçi-tâla (miçra varna)</i> Birdsong	Modified Specified birds, motivically linked to the <i>deçi-tâla</i> Retrograde (exact) Blackbird only Permutation: extremes to centre (bar by bar) Specified birds Permutation: centre to the extremes (bar by bar) Nightingale only
5. 'Pièce en Trio' (II)	6 <i>deçi-tâlas</i> in upper two voices Pedal	3 in each of the upper voices treated as <i>personnages rythmiques</i> ; order of rhythms determined by permutation (as in 'Reprises') ¹² Traditional 12-tone serial rows and their derivatives (P0 used in 'Les Mains'; and R11 = P0 of 'Soixante-Quatre') Issue: confusion over whether the pedal line becomes part of 12-tone rows Principal melody (chromatic)
6. 'Les Yeux dans les Roues'	12 12-tone rows in manuals 6 12-tone rows in pedals	Unstructured, but same rows used in 'Trio' (I) (p. 2) Unique permutation operations
7. 'Soixante-Quatre Durées'	<i>Swell</i> and <i>Pedal</i> (played together) <i>Swell and Pedal</i> Middle voice (throughout)	Permutation of 64 durations from the extremes to the centre in groups of 4, starting 61, 62, 63, 64, then 4, 3, 2, 1 Permutation of 64 durations from the centre to the extremes in groups of 4, starting 29, 30, 31, 32, then 36, 35, 33, 32 The above processes are the restated in retrograde Birdsong and occasional parsing of duration series Traditional 12-tone rows (R11 = P0 of 'Trio' (II))

¹² This is more complex than in 'Reprises par Interversion', which was monodic. As the rhythms in the lower voice are shorter, they require more repetition than those in the upper voices (see Section 8.5).

The twelve-tone writing is a mixture of interversion techniques, unstructured rows and traditional serialism. The two ‘serial’ movements (‘Pièce en Trio’ (II) and ‘Soixante-Quatre Durées’) are related to one another since P0 of the ‘Trio’ is R11 of ‘Soixante-Quatre’. Given Messiaen’s attitudes to traditional serialism it may seem strange that he chose to compose two pieces in this manner. However, as the analyses demonstrated, Messiaen has no particular method for deciding how rows are deployed. In addition, as the rows are embedded in extremely complicated rhythms, they are difficult to decipher. In Messiaen’s discussion of these pieces in the *Traité* he glosses over the pitch material and devotes pages to discussing the rhythmic techniques. It would appear that Messiaen’s direct response to serialism was to obfuscate the rows to show that rhythm (and other parameters) is more important. If Messiaen thought all parameters were equal he would not have left his readers wondering how exactly the pitch material is composed and deployed. Other twelve-tone writing is seen in ‘Les Yeux’: the pedals state all possible ‘fan’ readings (interversions) and the retrograde of a chromatic row; the manuals state independent, unstructured twelve-tone rows: akin to the palindromic toccata of *Île de feu* 2. The only slight difference is that each twelve-tone row starts a semitone higher (the rows in *Île de feu* 2 do not follow this procedure). Initially, this gave rise to the suspicion that the rows may be related through transposition (traditional serialism) but this was not the case. Therefore, in ‘Les Yeux’ Messiaen shows that music can be created using both structured (but not serial) and unstructured twelve-tone rows simultaneously.

The greatest innovation in the whole work was Messiaen’s expansion of the possibilities of interversion technique. Messiaen did this by applying the technique to rhythmic ideas developed earlier in the decade: specifically the *deçî-tâlas* and *personnages rythmiques*. Two of the more programmatic movements (‘Les Mains de l’Abîme’ and ‘Chants d’Oiseaux’) make use of *deçî-tâlas* but the rhythms are distorted and exaggerated. ‘Chants d’Oiseaux’ also sees the *deçî-tâlas* treated to permutations, but on a bar by bar basis. ‘Reprises par Interversion’ uses three *deçî-tâlas* per twelve-tone row. Messiaen uses interversions to determine the order in which the rhythms appear. As there are six twelve-tone rows, there will be eighteen statements of the *deçî-tâlas*. Messiaen then applies two fan operations to the resulting material before stating the first section backwards. This means that the entire monodic piece reads the

same forwards as backwards, creating a sound world that is harsher than the ‘palindromic’ toccata of *Île de feu* 2. This monody is also more austere than that of *Mode de valeurs*; this is because of Messiaen’s ultra-specific registration of the organ and the fact that when the interventions start the fixed timbres are also permuted.

In the second movement, ‘Pièce en Trio’ (I), Messiaen treats seventeen *deçî-tâlas* to irrational rhythms and plays them to unstructured twelve-tone rows. The twelve-tone rows used in the second half of the piece are identical to (and are applied in the same order as) the unstructured rows in ‘Les Yeux’. In the ‘serial’ ‘Pièce en Trio’ (II), Messiaen uses *deçî-tâlas* in a similar manner to that in ‘Reprises’ but as there are now three voices (two stating the *deçî-tâlas* and the main ‘chromatic’ melody in the pedal), the texture is infinitely more complex. Finally, in ‘Soixante-Quatre Durées’ the pitch of the serial twelve-tone unfolding is subjected to Messiaen’s own intervention technique. This must surely be Messiaen’s ultimate response to serialism:¹³ using the traditional Viennese techniques to generate the rows, but applying durations using a technique first hinted at in the chromatic durations of Messiaen’s earlier works. And, as if this were not enough, the durations are parsed by material in the middle voice, which evokes birdsong whilst simultaneously completing the twelve-tone rows. Allen Forte says that

it is not too problematic to suggest that in addition to his purely musical motivations for composing the *Livre d’orgue* in a highly innovative serial manner, Messiaen had a strong desire to show how serial methods might produce a music totally different from that of the Viennese, and thus stand as a model for the younger generation of avant-garde composers who were so strongly dedicated to serialism.¹⁴

10.5 Final Comments

It is interesting to note that Messiaen’s return to bold Christian, Catholic theology (with *Couleurs de la cité celeste*) did not happen until after his wife died. Perhaps during the long years of Claire’s illness, Messiaen was not totally at peace with God; we can only speculate that his unending love for Claire and his blossoming relationship with Yvonne was an emotional, physical, and

¹³ For a discussion of how some of these techniques reappear in some of Messiaen’s later works, see Vincent Benitez, ‘Reconsidering Messiaen as Serialist’, *Music Analysis*, 28 nos 2–3 (2009), 267–99.

¹⁴ Forte, ‘Messiaen as Serialist’, p. 5.

spiritual tug-of-war. We must remember that it was not until late October 1953 that Claire left the family home to go into long-term care and that she would live for another five-and-a-half years, before passing away on 22 April 1959.¹⁵ The ‘Adieu’ of *Harawi* from 1945 must have seemed like a lifetime ago to Messiaen and it was only through Claire’s passing that Messiaen would finally be released from some fifteen years of torment.

In a lecture in Brussels in 1958 Messiaen said ‘Music is not made with sounds alone... it is also made with intensities and densities (dynamics), with timbres and attack (phonetics), with accents, arsis and thesis, and different tempi (kinematics), and last, above all, with time, the divisions of time, numbers and durations (quantities).’¹⁶ This sums up the aesthetics of Messiaen’s music from 1949 to 1952. A year later (in 1959), following a commission from Heinrich Strobel, the birds were recast (with the piano temporarily banished), and the rhythmic techniques developed from 1949 to 1952 were revisited: the premiere of Messiaen’s latest work would ensue with as much scandal and furore as that of *Le Sacre*. In the avant-garde atmosphere of Donaueschingen in October 1960, there was bewilderment at the ‘Epôde’ (movement 6) of *Chronochromie*.¹⁷ *Chronochromie*, and its reception, saw Messiaen once again thrust back onto the international stage. The reluctant avant-gardist was back but, in truth, he had never gone away.

¹⁵ Dingle, *Life of Messiaen*, pp. 142, 152.

¹⁶ Olivier Messiaen, *Conférence de Bruxelles (Lecture in Brussels)* (Paris: Leduc, 1960), p. 1. At the end of the lecture Messiaen speculates about the future of music: ‘Let us leave it in the hands of the young: its destiny is within their grasp. Here, at least, [we have] two musicians of genius: Pierre Boulez and Karlheinz Stockhausen.’ (p. 4). Quotation emended.

¹⁷ Nichols, *Olivier Messiaen*, p. 65.

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